TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

A Penton Publication

May, 1952

Volume 17—Number 5

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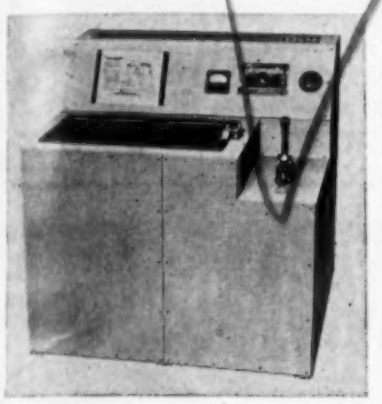
EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

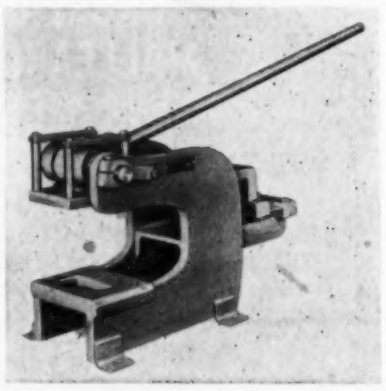
CHROME PLATING UNIT
has built-in selenium rectifier



Designed for industrial chrome plating of small tools or parts in large quantities, this 250-amp Chromaster unit can also be used for plating larger parts with areas up to 125 sq in. Model A-250 unit makes use of Chromasol chrome plating solution to extend normal life of cutting tools, wear parts and dies up to ten times. Individual floor-mounted plating tank and power units are designed to minimize installation costs and conserve floor space. Power unit contains built-in selenium rectifier, complete with instrument panel and controls for accurately regulating the rate of chrome deposit. Average plating time is 3½ minutes for cutting tools. Power and tank units can be placed side by side or with tank in front. Made by **Ward Leonard Electric Co.**, Industrial Chrome Div., 51 South St., Mt. Vernon, N. Y.

▲ For more details circle **NED-4000** on enclosed inquiry slip ▲

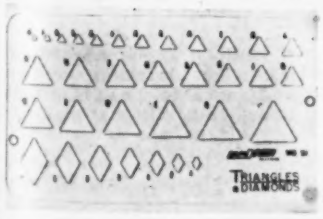
HORNING PRESS
narrow bed unit has 12-ton capacity



Punch and die alignment accurate to 0.0001-in. is obtained in this 12-ton capacity horning press with 5¼-in. die space. Capable of performing a variety of operations, it has a narrow bed to permit horning or flange notching operations on work pieces or assemblies after forming or assembly. Alignment accuracy is maintained by the aligning leaf assembly, to one end of which the punch is fastened. Other end is attached to the press frame by means of a flat spring serving as a pivot when punch is raised and lowered. Notching is permissible in any direction without heels on the punches. Because of leaf assembly rigidity, except at its flexing point, and with crankshaft applying pressure to the leaf at two widely separated points, it is unnecessary to center the load on the punch plate. Made by **Leslie Welding Co.**, 2937 W. Carroll Ave., Chicago, Ill.

▲ For more details circle **NED-4001** on enclosed inquiry slip ▲

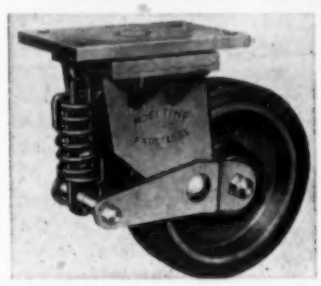
TRIANGLE & DIAMOND TEMPLATE
cut-outs have pencil allowance



A general purpose tool for engineers and draftsmen is No. 51 triangle and diamond template made of 0.030-in. matte finish mathematical quality plastic. Template has 26 triangles from 3/32 to 1 in., with increments in 32nds to ¾ in. and increments of ⅛ from 3/16 to 1 in. Seven diamonds range in size from ¼ to 1 in. in increments of ⅛ in. Diamonds up to 2 in. can be made by using triangles back to back. All cut-outs are precision smooth and have pencil allowance for absolute accuracy. Template measures 4 x 7 in. Made by **Rapidesign, Inc.**, P. O. Box 592A, Glendale, Calif.

▲ For more details circle **NED-4002** on enclosed inquiry slip ▲

SPRING CUSHION TYPE CASTER
maintains load level on trucks



A 2-to-1 ratio lever arm plus shock absorbing spring under constant compression are features of double-action spring cushion type casters which maintain level load on trucks moving over irregular floors. Wheels contact floor surface at all times, minimize bounce and do not raise truck when mounting obstacles. Illustrated is SH 700 series swivel plate caster featuring extended wheel offset for easy swiveling. Companion to this unit is the SH 300 series caster which has rigid mounting plate riveted directly to deeply corrugated steel plate horn. Casters have roller bearing wheels of 8, 10 or 12-in. diameters and load range of 500 to 1000 lb. Wheels, offered in semisteel, vulcanized or Plaskite types, are interchangeable. Made by **Faultless Caster Corp.**, Dept. NED, 1940 Clarence St., Evansville 7, Ind.

▲ For more details circle **NED-4003** on enclosed inquiry slip ▲

CLAMP TYPE VOLT-AMMETER
jaws accommodate up to 1½-in. cable

Cable voltage and amperage can be measured instantly and accurately without breaking circuit or insulation with type AC-1 clamp-type volt-ammeter. For amperage readings, trigger is pressed, opening pair of insulated jaws for encirclement of cable or bus bar. Jaws accommodate up to 1½-in. diameter cables and bus bars up to 2 x ½ in. Amperage ranges available are 0-12, 0-60, 0-120 and 0-600 amp ac. Voltage leads plug into handle of instrument for volt readings, and 0-150 and 0-600 v ac ranges are available. Hand-sized instrument will fit in pocket, weighs less than 2 lb and measures 11 x 3½ x 1⅞ in. overall. Accuracy is plus or minus 3 per cent of full scale deflection. Complete unit includes voltage leads and carrying case. Made by **Columbia Electric Mfg. Co.**, Dept. NED, 4553 Hamilton Ave., Cleveland 14, O.

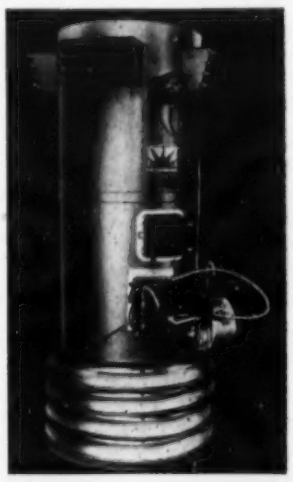
▲ For more details circle **NED-4004** on enclosed inquiry slip ▲

HYDRAULIC CIRCUIT GUIDE
consists of template and handbook

Complete key to all standard Joint Industry Conference symbols for industrial hydraulics is provided by JICircuit kit. Valuable for those concerned with hydraulic designing, engineering or circuit application, the kit simplifies planning by making diagrams easier to read or draw. Kit is made up of two units, a plastic drawing template containing basic elements of all JIC symbols and a 32-page booklet in which all key examples of circuit components are represented by symbols approved by the Joint Industry Conference for industrial equipment. Accompanying each symbol is a reference to the Denison catalog describing that particular piece of equipment made by company. Although priced at $1, guide is being offered free of charge to those whose work involves industrial hydraulics. Write on business letterhead, stating title or position, to **Denison Engineering Co.**, 1152 Dublin Rd., Columbus 16, O.

▲ For more details circle **NED-4005** on enclosed inquiry slip ▲

OIL-GAS BURNER
fuel changeover is instantaneous



A combination oil-gas burner which permits instantaneous changeover from gas to oil or oil to gas is available for the entire line of Thermobloc industrial forced air direct fired heaters. No piping or burner changes are needed and the changeover can be automatic or with manual push-button. In effect, the burner operates most of the time on the most economical fuel available. All that is needed for completely automatic operation in areas where gas is shut off during periods of short supply is an outdoor thermostat which can be adjusted to a changeover thermometer. Made by **Prat-Daniel Corp.**, Thermobloc Div., 11-A Meadow St., South Norwalk, Conn.

▲ For more details circle **NED-4006** on enclosed inquiry slip ▲

DO YOU KNOW? "Solenoid Designs for Aircraft" is a compilation of over fifty full-scale engineering drawings of solenoids which are developed expressly for control and operating functions in airplanes. These drawings are bound in a leatherette cover. Charts show performance characteristics. To get a copy of this manual, write on your company letterhead to West Coast Electrical Mfg. Corp., Century & Main Sts., Los Angeles 3, Calif.

▲ For more details circle **NED-4007** on enclosed inquiry slip ▲

DO YOU KNOW? You can win a $1000 U. S. Savings Bond merely for creating a suitable name for the new Rotoblast airless blast cleaning barrel which was shown to the public for the first time at the International Foundry Congress. Machine is designed for batch cleaning of medium size castings at a high production rate and at low cost. Contest rules are simple. The name must be suitable for trade mark registration. In case of duplication, the entry bearing the earliest postmark will be selected. Contest closes midnight, May 24, 1952. Submit entries directly to Pangborn Corp., 1400 Pangborn Blvd., Hagerstown, Md.

▲ For more details circle **NED-4008** on enclosed inquiry slip ▲

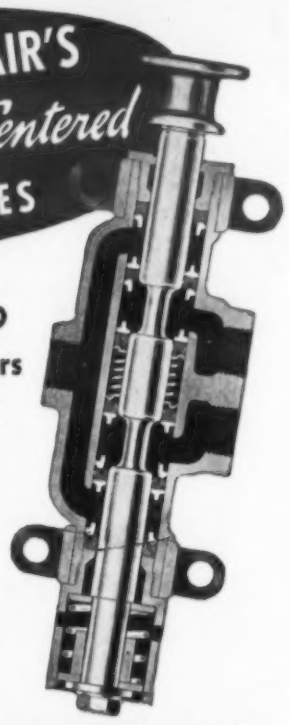
DO YOU KNOW? Fifteen simple rules to encourage the art of smoking in an industrial plant are set forth in a good-humored way in a small booklet recently issued to employees of a plant when they were permitted to smoke on the job for the first time. This booklet, entitled "No Smoking Allowed," but with the "No" crossed out with a red X, was tied in with floor plans displayed on bulletin boards which showed those locations where smoking was prohibited because of fire hazards. Cartoons enliven the simple, direct text. Sample of this booklet is available from Standard Pressed Steel Co., P. O. Box 581, Jenkintown, Pa.

▲ For more details circle **NED-4009** on enclosed inquiry slip ▲

DO YOU KNOW? More than 100 new products will be exhibited at the Industrial Finishing Exposition at Chicago's International Amphitheatre on June 16 to 19, 1952. Sponsored by the American Electroplaters' Society, this exposition will be held jointly with their 39th annual convention. More than 20,000 industrial executives are expected to attend. For full information, write Lewis M. Glassner, Exposition Director, Suite 580-584, 35 E. Wacker Dr., Chicago 1, Ill.

▲ For more details circle **NED-4010** on enclosed inquiry slip ▲

Introducing VALVAIR'S NEW Spring-Centered NEUTRAL VALVES



STOP FAST . . . HOLD Double-acting Air Cylinders in ANY POSITION!

Valvair's new spring centered neutral valve is for air, hydraulic or vacuum service; for pressures up to 300 p. s. i. Sizes: ¼" through 1". Control assembly can be knob, lever, treadle, cylinder or solenoid.

Write for Bulletin EN-5.

VALVAIR CORPORATION • 947 Beardsley Ave., Akron 11, Ohio

Affiliate: Sinclair-Collins Valve Company

Rely Upon Valvair — 2-WAY — 3-WAY — 4-WAY

▲ For more details circle NED-4011 on enclosed inquiry slip ▲

A new tool for cleaning dirty metal surfaces

WEAR-EVER NICKLTEX

Nickltex is a highly flexible, precision-made cleaning tool that outlasts ordinary scour cloths and sponges, works easier, and can be washed clean.

For cleaning cocks, Y's, elbows, coils

Cuts through dirt

Nickltex is made from high nickel alloy flattened wire, diamond drawn, and produced with all the care of a fine machine tool. This special alloy wire, which holds its twist *permanently*, is knitted into a continuous interlocked mesh. It handles easily because it cuts through dirt, doesn't just push or rub it off. And it can be used flat, balled, or like a shoeshine cloth in cleaning pipes and coils.

Use folded for flat or rounded surfaces

Doesn't splinter—Keeps clean

Nickltex will not splinter, unravel, leave a metallic surface deposit, or harm workers' hands. It's easy to keep clean, too. Just wash in soap and water, steam or solvent. Dirt particles drop through the mesh and Nickltex comes out clean as new. It withstands the most powerful acids and alkalies, is rustproof, and highly corrosion resistant.

In hard-to-get-at corners, "ball" the Nickltex

Outlasts anything else

We don't know exactly how long Nickltex will wear in your plant; but we do know it outlasts anything on the market today. In one case on record a Nickltex cloth already has outlasted 144 curled wire sponges and is still going strong. In another case (a meat packing plant) it proved to be 30 times less expensive because it lasted so long. It will pay you to ask your supply house about Wear-Ever Nickltex. Or mail the coupon today to:

Washes clean—always SANITARY

THE ALUMINUM COOKING UTENSIL COMPANY

7105 Wear-Ever Building • New Kensington, Pa.

(Manufacturers of Wear-Ever Aluminum and Professional Cutlery)

( ) Have your representative show me how Wear-Ever Nickltex is superior to scour cloths and sponges.

( ) Enter our trial order for a case of 12 Nickltex Flex-cloths at $11.40.

NAME .....

POSITION .....

Cut out, clip to your letterhead, and mail today

▲ For more details circle NED-4012 on enclosed inquiry slip ▲

Share the Knowledge

NEW EQUIPMENT DIGEST is sent to you each month free because you are a responsible engineering, management, production, purchasing or maintenance executive in an established industrial firm. There are undoubtedly others in your organization who will also profit by receiving this publication regularly. All you need to do is to write their names and titles in the proper spaces in one of the coupons which are a part of the inquiry slips in this issue. They are found between pages 16-17 and 88-89. Just fold, seal and mail the slip after you have filled it out. We'll pay the postage!

A. N. Gregg
EDITOR

PIPE CONNECTOR seals leaks or joins units of pipe

Purpose of Bel connector is to seal leaks in pipe or to join pipe units without threading in temporary or emergency cases. Device creates cavity around leak which contains fluid at same pressure that exists inside pipe. Equalization of pressure results in zero pressure on pipe walls and thus prevents extension of the leak. All contacts of the screw-attached connector with the pipe are with Neoprene, making joint capable of withstanding vibration. Neoprene seals permit use with hot or cold water, steam, fuel oil or gasoline at pressures up to 60 psi. Elbow type connector, illustrated, joins section of straight pipe with elbow or T section, while "pipe" type joins straight units. Repairs are made without shutting off flow. Made by **Holoal Mfg. Corp.**, P. O. Box 95, Bellerose 26, N. Y.

▲ For more details circle NED-4013 on enclosed inquiry slip ▲

LOW-LIFT PLATFORM TRUCK powered unit has 7500-lb capacity

Skid and skid-bin loads up to 7500 lb can be handled easily in confined spaces with extra-heavy-duty low lift platform powered hand truck called the Worksaver. Platform is 11 in. high and has 3-in. lift. Underclearance is 5 in. for operation on ramps. Standard dimensions of platform are 26½ x 42 in. although other lengths are available. Raising platform does not increase its overall length. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

▲ For more details circle NED-4014 on enclosed inquiry slip ▲

Don't Handcuff That Engine!

STOP Costly Cylinder Wear with the UNIVERSAL TOP OILER

- Reduces Valve and Ring Failures
- Lowers Fuel Octane Requirements
- Reduces Oil and Gas Consumption
- Frees Sticking Valves
- Increases Payload Power

The Universal Top Oiler assures constant, uniform top cylinder lubrication on all types of internal combustion engines by metering vaporized top oil through the intake manifold. When used with an approved upper-cylinder lubricant, it neutralizes corrosive acids, stops carbon and gum formation, prevents dryness in the hottest, busiest part of the engine. Easy to install. List price: $8.95.

Provides maximum benefit when used continuously with Universal Top-Oil. Write for full details.

Gentlemen:
Please send complete information on the UNIVERSAL TOP OILER and the new Universal Top-Oil.

Name _____

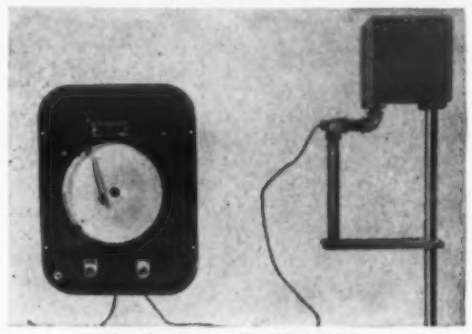
Address _____

City _____

UNIVERSAL LUBRICATING SYSTEMS, INC.
792 ALLEGHENY AVENUE • OAKMONT, PA.

▲ For more details circle NED-4015 on enclosed inquiry slip ▲

For Quality Control of Viscosity . . . Use the NORCROSS RECORDING-CONTROLLING VISCOMETERS



Viscosity Range: .2 to 200,000 c.p.

Applicable to:

TEXTILES	ADHESIVES	PAINTS
PLASTICS	FOOD PRODUCTS	RESINS
PAPER	PETROLEUM	PRINTING
SYNTHETICS	SYRUPS	SOAP

NORCROSS RECORDING-CONTROLLING VISCOMETERS

Can be Used For:
Recording or automatic control;
Operation under pressure or vacuum;
Explosion proof applications.

Give You:
Greater Production — Improved Quality
Labor Savings — Lower Costs

Write for illustrated booklet

NORCROSS CORPORATION
247B Newtonville Avenue, Newton 58, Mass.

▲ For more details circle NED-4016 on enclosed inquiry slip ▲

BROWNING

First Again!

BROWNING SHEAVES with "UNBREAKABLE" MALLEABLE IRON SPLIT TAPER BUSHINGS

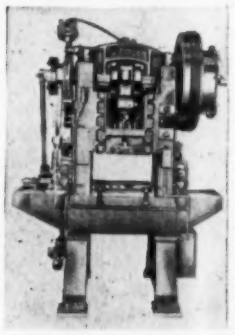
WRITE FOR THE NAME OF THE BROWNING DISTRIBUTOR NEAR YOU

BROWNING MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY, U. S. A.

▲ For more details circle NED-4017 on enclosed inquiry slip ▲

modern press engineering + correct die design =

HI-STAMPING PRODUCTION

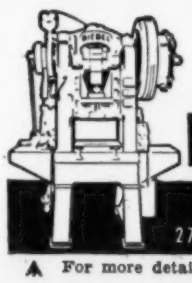


DIEBEL 40-TON DI-MATIC

- **Positive action air clutch and brake**—accurate stampings up to 360 per minute.
- **Four main bearing crankshaft frame** provides greater rigidity, smoother operation, longer life.
- **Cylindrically shaped slide**—over 380 square inches of guiding surface assures longer press and die life, **less down time.**
- **Air clamped roll feeds** driven by overrunning double ball bearing precision clutch—variable feeds up to 11 inches—easy to set and adjust.
- **Built-in shock absorbers,** minimize vibration, noise and shock to die, press and floor—thus eliminating costly maintenance and repairs.

These outstanding features, plus twelve others, add up to greater profits for you!

For a guide to important savings, write on your letterhead for a new booklet, "Cost Savings thru Precision Stamping"



DIEBEL HI-PRODUCTION AUTOMATIC PRESSES

Di Machine Corp.
2701 W. IRVING PARK ROAD • CHICAGO 18, ILL.

▲ For more details circle NED-4018 on enclosed inquiry slip ▲

PET TOOLS

SUPERDUTY ELECTRIC DRILLS

For Industry's Specific Needs

Here's what SUPERDUTY means to YOU . . . . . .

Reserve Power for maximum performance in all duty classifications

Speeds to meet job requirements

Compact, Lightweight, Streamline Design for handling ease and minimum fatigue

Top-Quality, Rugged Construction for endurance and trouble-free performance

No Price Premium makes Superduty tools unmatched values

Superduty Drills Meet U. S. Government and Military Specifications

Ask your distributor for full details or write for general catalog to Portable Electric Tools, Inc., 353 West 83rd Street, Chicago 20, Illinois

In Canada: Portable Electric Tools, Ltd., 369 Danforth Rd., Toronto 13, Ontario.

48 MODELS
¼" Drills
500 to 5000 Rpm.
Pistol or Saw Grip

3 MODELS
⅜" Drills
400 to 1000 Rpm

3 MODELS
½" Drills
500 to 600 Rpm.

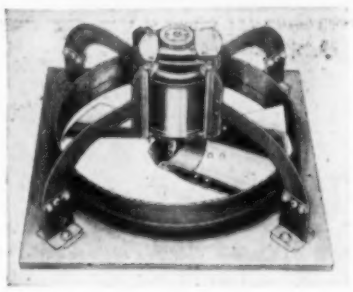
For more details circle NED-4019 on enclosed inquiry slip

VARIABLE VOLTAGE TRANSFORMER for alternating current applications

Rated at 120 v, 60 cycles, single-phase input and 0-120/132 v, 1.25 amp, 150/165 va output Powerstat type 10 variable transformer is for every alternating current voltage control application. It is designed for 50, 100 and 150-w applications. Highly efficient, unit is cool in operation and does not have to be tailored to the load. It supplies a continuously adjustable voltage to any load up to its rated capacity. Transformer is made for single hole mounting and has a projection on its base for keying to the panel. Installation can be under a 3-in. chassis. Made by **Superior Electric Co.**, 51 Meadow St., Bristol, Conn.

For more details circle NED-4022 on enclosed inquiry slip

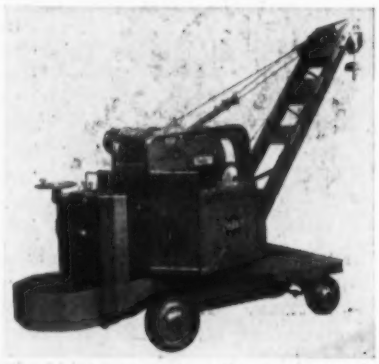
PROPELLER FAN for flush ceiling mounting



For exhaust uses in various locations, model MDA direct drive propeller fan is installed flush with the ceiling, with the totally enclosed motor and motor mounting being concealed by the ceiling itself. Only the base plate and fan blade are visible from the room. Blade sizes range from 14 to 36 in. and motors vary in current characteristics and horsepower in proportion to fan size. Deliveries range from 1585 cfm in smaller model to 12,400 cfm in 36-in. model. Acid resisting varnish is available for use in locations where corrosive fumes are being handled. Made by **American Air Filter Co.**, Herman Nelson Div., 1824 Third Ave., Moline, Ill.

For more details circle NED-4023 on enclosed inquiry slip

CRANE TRUCKS have 19-ft telescoping booms



Heavy castings, machinery, bar stock, sheet metal packs and other irregular shapes can be moved in and out of various types of railroad cars by line of mobile crane trucks made in 6000 and 10,000-lb capacities. Cranes have 19-ft telescoping booms and can be used for erection jobs as well as dock, warehouse and general millwright work. Travel, hoist, boom and slew motions are combined in one unit. Made by **Baker-Raulang Co.**, Baker Industrial Truck Div., 1245 W. 80th St., Cleveland 2, O.

For more details circle NED-4024 on enclosed inquiry slip

make Stronger solder joints Quicker and Cheaper!

Using "Fork" in tight space to "pinpoint" the heat.

IDEAL Thermo-Grip®

STRONGER—resistance heating provides ample concentrated heat—assures full adhesion of solder.

QUICKER—heating begins instantly. No preparation, no pre-heating, no set up.

CHEAPER—no wasted time or current. No chance of melting nearby joints or burning parts. No risky open flame.

Proved by thousands of manufacturers. Sizes for every soldering or brazing job.

Sold through Leading Distributors

"Standard" 1000-Watt Model with "Plier", "Fork" and "Pencil" attachments also available.

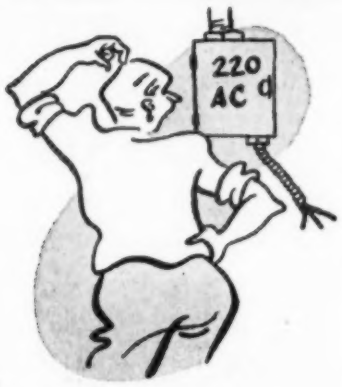
FREE TEST! You Be the Judge

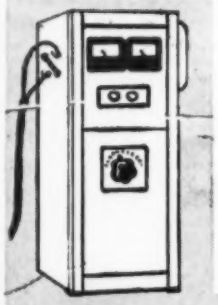
IDEAL INDUSTRIES, Inc.
1032 Park Avenue
SYCAMORE, ILLINOIS
Please arrange FREE Thermo-Grip demonstration and send catalog data.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE____

For more details circle NED-4026 on enclosed inquiry slip

NEED D.C. POWER?





Get it from your A.C. line with a

SELENIUM RECTIFIER

- Easy to install anywhere
- Low in cost
- No maintenance
- Instant starting
- Add capacity at any time

If you will tell us your D.C. needs, we will gladly make suggestions from our wide variety of stock models.

WRITE TODAY FOR FULL INFORMATION

RAPID ELECTRIC CO.
2881 MIDDLETOWN ROAD, NEW YORK 61

For more details circle NED-4020 on enclosed inquiry slip

ROLLA-DUCT
POWER & LIGHT UNIT

- Also available for flood-lighting and infra-red heating.
- Sturdy, all-steel tubular carriage. Fully adjustable.
- Electrically safe. Circuit breaker for full worker protection. Entire unit fully grounded.
- Power head on ball-and-socket swivel locks in any horizontal or vertical position.
- Heavy duty Indestructo cable—21 ft., three conductor, #12 A.W.G. power cable.
- Approved rating for 20 ampere loads, 115 volt operations.
- Versatile. For use wherever standard wiring is inconvenient to use.

Listed by Underwriters' Laboratories, Inc.
Sold thru leading electrical wholesalers

EVERYTHING IN WIRING POINTS TO
National Electric Products
PITTSBURGH, PA.
Plants in Ambridge, Pa., Terrance, Calif. and Elizabeth, N.J.

WRITE FOR COMPLETE INFORMATION. USE THIS COUPON

National Electric Products Corporation
1353 Chamber of Commerce Building
Pittsburgh 19, Pennsylvania

Please send me complete information on Rolla-Duct. I am interested in using it for_____.

NAME_____ TITLE_____
COMPANY_____
ADDRESS_____

For more details circle NED-4027 on enclosed inquiry slip

KLEMP Floorsteel "PATHS" make materials handling EASIER!

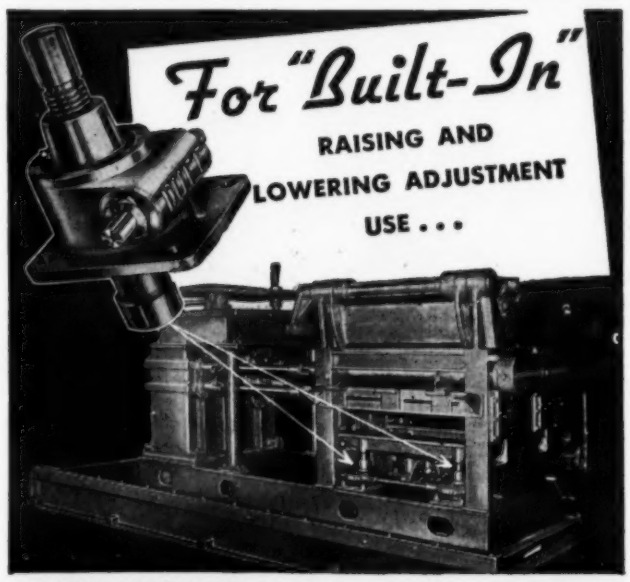
Roll flexible Floorsteel out like a rug over your present floor . . . fill its rugged steel grid with concrete or mastic . . . and you have a solid, level, enduring "path" that the heaviest loads roll over, *easier*. Cracks, ruts and potholes will never snag your truck wheels again! Floorsteel stays smooth, quiet and non-skid, for loads rest on its exposed steel edges—not on the concrete. Easy to lay, maintenance-free. Send for our informative, illustrated bulletin *today!*

Ask about Klemp Hexteel heavy-duty surface armor.

KLEMP
We Tread the World with Safety

KLEMP METAL GRATING CORP.
Steel Flooring Specialists
6611 SO. MELVINA AVENUE • CHICAGO 38, ILLINOIS

For more details circle NED-4021 on enclosed inquiry slip



DUFF-NORTON Worm Gear Jacks

These jacks may be used singly, in tandem or in groups of four, six or eight, connected by means of shafts or mitre gears for raising and lowering mill tables, machine beds, presses, and many other applications. Capacities vary from 5 to 50 tons, with raises from 3" to 25". Jacks are furnished in accordance with load per jack, raise required and application.

For suggested applications write for Bulletin AD-5 H.

THE DUFF-NORTON MANUFACTURING CO.
MAIN PLANT and GENERAL OFFICES, PITTSBURGH 30, PA.
CANADIAN PLANT, TORONTO 6, ONT.
"The House that Jacks Built"

For more details circle NED-4025 on enclosed inquiry slip

STEEL

Every Kind

Some steel products are in short supply but over-all stocks are still large, diversified

NEARBY STOCKS INCLUDE:

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—U, M. & sheared, Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types & coatings
TUBING—seamless & welded, mechanical & boiler tubes
STAINLESS—Allegheny sheets, plates, bars, tubing, etc.
REINFORCING bars & access.
BABBITT bearing metal
MACHINERY & TOOLS for metal fabrication

RYERSON

Joseph T. Ryerson & Son, Inc. Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco Spokane, Seattle

For more details circle NED-4028 on enclosed inquiry slip

AT LAST!
PRECISE TORQUE CONTROL
Automatically
AT HIGH SPEED
for
STUD DRIVING
NUT RUNNING
TORQUE TESTING

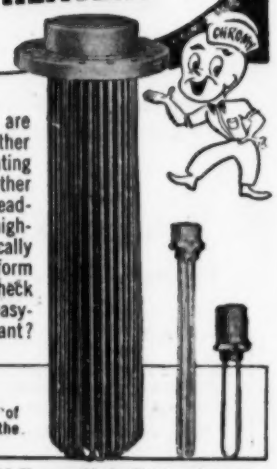
New POWER-TORQUE Tools *automatically* give precise control to within 2% of Torque limits! Eliminate need for hand torquing inspections. Drastically cut scrap! Models with capacities from 0-25 to 0-2500 inch lbs. Air, electric or high cycle motive power. For specifications write Dept. C-5.

POWER-TORQUE TOOLS Registered U.S. Patent Office

Manufactured by
GARVIN BROTHERS, INC.
P. O. BOX 536, SOUTH BEND 24, IND.

For more details circle NED-4029 on enclosed inquiry slip

HEAT GASES and LIQUIDS
Efficiently and Economically
with
CHROMALOX
Heavy-Duty
IMMERSION HEATERS



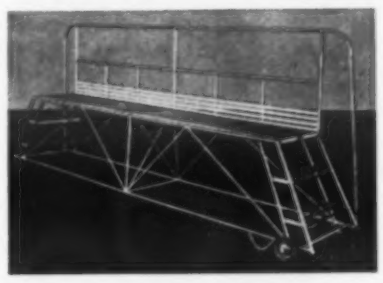
CHROMALOX Electric Immersion Heaters are suitable for heating compressed air and other gases; for super-heating steam; for heating liquids and Dowtherm, Arochlor and other heat-transfer mediums. Heaters can be readily applied to high-temperature and high-pressure operations; when thermostatically controlled, accurate temperature and uniform product controls are possible. Why not check the advantages you can gain by using easy-to-install CHROMALOX Units in your plant?

Get the Booklet
"A to Z with ELECTRIC HEAT"
It contains actual application photographs of electric heaters at work in plants throughout the country. No obligation.

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.
See other advertisement on page 63
CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-4030 on enclosed inquiry slip

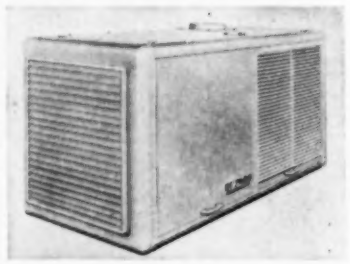
INSPECTION-MAINTENANCE PLATFORM of metal construction for safety



Expanded metal treads and platform afford safe footing on this platform-scaffolding unit which is mounted on wheels for mobility. Ample space is provided for both tools and workmen. Constructed of welded tubing, unit is built to specific requirements for length, height, width and rail construction. Platform is particularly suited for machinery and equipment erection as well as for maintenance operations. Made by **Ballymore Co.,** 139 Pennsylvania Ave., Wayne 3, Pa.

For more details circle NED-4031 on enclosed inquiry slip

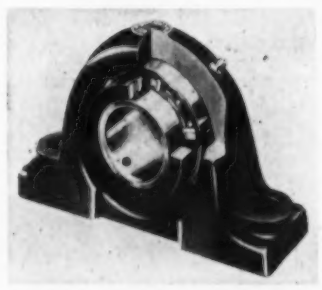
GAS-FIRED HEATER is compact central type unit



Rated 100,000 Btu, this Pac gas unit/central heater operates with natural, manufactured, mixed and LP gases. It measures only 22 x 23 x 47½ in. and is AGA-approved for use with or without ducts. All controls are enclosed within the case. Flanges on both ends can be fitted with standard louver panels or used to connect ducts. Four tapped sockets on both top and bottom permit either suspended or base mounting. Flue can be connected at top or side by switching casing and connector plates. Made by **Reznor Mfg. Co.,** 168 James St., Mercer, Pa.

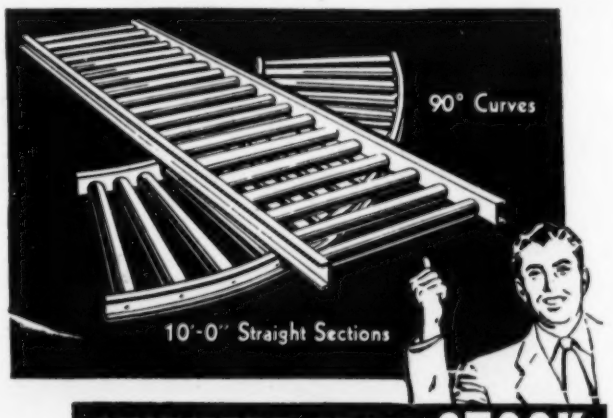
For more details circle NED-4032 on enclosed inquiry slip

PILLOW BLOCK factory-sealed against dirt



Practically frictionless wiping action of seal against inner bearing ring is feature of Hess-Bright SY unit pillow block which has lubricant-retaining Du-Pont Fairprene red seal. Other features are rotating flingers to exclude dirt, collar with set screws for easy installation, spherical outer ring compensation for initial misalignment, re-lubrication through Alemite fitting and interchangeability with existing installations. Block was designed for use in conveying, agricultural, chemical, food, ginning and textile machinery; light fans and blowers; light power take-off units and jack shafts. Factory-sealed against dirt, block is made in shaft diameter sizes from 1 3/16 to 2 15/16 in. by **SKF Industries, Inc.,** Dept. 616-A, P. O. Box 6731, Philadelphia 32, Pa.

For more details circle NED-4033 on enclosed inquiry slip



SHIPMENT FROM STOCK

What are your needs in stock roller conveyor? Offered in several sizes for average duty conveying. Roller spacing 4" or 6" centers. Roller lengths of 12", 16" and 20". Capacity 75 lbs. per ft. with supports on 10'-0" centers and 380 lbs. per foot with supports on 5'-0" centers. Both stationary and portable supports available. Write for literature.

Check your needs today

Logan Conveyors
LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-4034 on enclosed inquiry slip

if you're interested in DEPENDABLE D.C. POWER you'll want this booklet

Booklet #127, "Sel-Rex PLATING POWER," has just come off the press. It contains the comprehensive line of Sel-Rex Selenium Rectifiers with descriptions, drawings and photographs. Every D.C. Power requirement is clearly discussed with the proper equipment recommended for maximum low cost efficiency.

WRITE DEPT. NED-5 FOR YOUR FREE COPY

The World's Largest Selenium Rectifier is a Sel-Rex

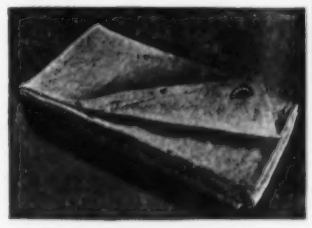
BART-MESSING CORPORATION
229 Main Street • Belleville 9, N. J.
Manufacturers and distributors of Plating and Polishing Equipment and Supplies.

For more details circle NED-4035 on enclosed inquiry slip

GARDWELL Products

BLANKETS and WELDING CURTAINS — — — for GREATER SAFETY

GARDWELL BLANKETS
Both wool and asbestos blankets are available. Asbestos blankets are made from Underwriters Grade Asbestos made in any required size.



GARDWELL WELDING CURTAINS
Both asbestos and fireproofed duck curtains are available. Made with eyelets or wide seam at top made in any required size.

GARDWELL Products also include a complete line of Safety Clothing, Hats, Leggings, etc. as well as many important items of Safety Equipment. Write for the complete GARDWELL Catalog today.

Safety CLOTHING AND EQUIPMENT Co.
1990 EAST 69TH STREET • CLEVELAND 3, OHIO
PHONE HENDERSON 2-0400

For more details circle NED-4036 on enclosed inquiry slip

Ford high speed rotary tools
CUT ALUMINUM AND MAGNESIUM
faster and without loading

Write for details and prices!
M. A. FORD MFG. CO. INC.
721 West River Street, Davenport, Iowa

For more details circle NED-4037 on enclosed inquiry slip

AUTOMATIC HOT START ✓
SILICONE INSULATION ✓
ARC STABILIZATION ✓

you'll find them ALL in A-C WELDERS

Yes, all of these important features contributing to better welder performance and longer welder life are combined in M&T a-c welders.

Automatic "hot-start" means faster welding because it provides correct current surge automatically for any current setting—permits easy arc starting without dialing.

Silicone insulation assures longer welder life, permits more overloading—withstands higher temperatures, moisture, chemical fumes.

Arc stabilization steps up welding speeds, improves quality by guaranteeing a stable arc: eliminating "pop-outs."

A-C welding at its best is available from 30 through 625 amps in the new M&T. Write for literature. Or contact your nearest distributor or M&T Branch.

Contact your local distributor or nearest M&T office.

METAL & THERMIT CORPORATION
100 EAST 42nd STREET • NEW YORK 17, N. Y.

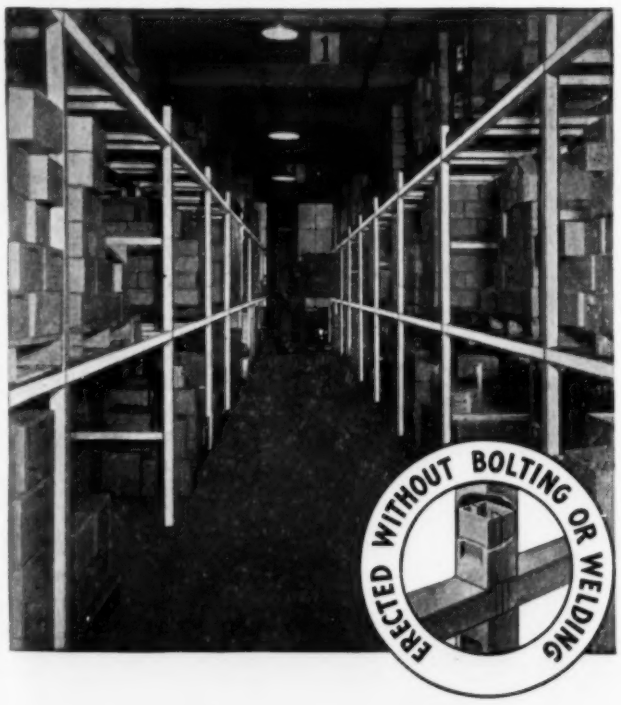
▲ For more details circle **NED-4038** on enclosed inquiry slip ▲

from coast to coast business acclaims

AMERICAN non-bolting...non-welded RACKS

the ideal racks to fit every storage need

here's another American Rack installation



Send for Catalog

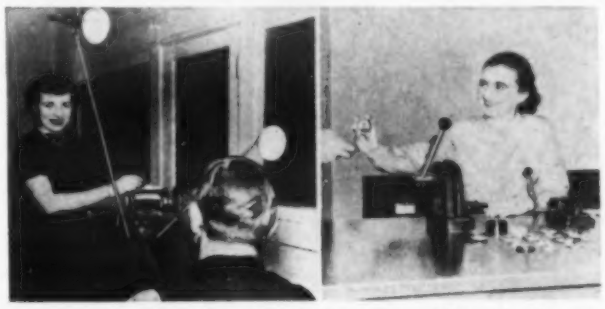
AMERICAN TUBULAR MATERIALS HANDLING EQUIPMENT
PRODUCED BY BORROUGHS MFG. DIVISION

5963 Linsdale • Detroit 4, Michigan

▲ For more details circle **NED-4039** on enclosed inquiry slip ▲

BADGE MAKING KIT produces photo-badge in 90 seconds

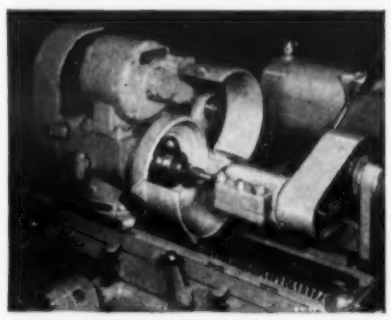
Ninety seconds is all it takes to produce one picture identification badge for new plant employee or visitor with the Badge-Master kit, consisting of the Polaroid Land



camera, the Badge-Master badge assembling device and the Photo Trimmer. Kit also contains lights, camera tripod and other equipment necessary to do complete photo identity job. Land camera produces a double photo in 60 seconds, one for the badge and one for personnel records. Tamperproof badges are stamped from lightweight tarnishproof metal by the Badge-Master, a device that produces 6 tons instant pressure with pull of lever. The Photo-Trimmer, also hand lever operated, trims picture to badge size. Badges are available in variety of colors for departmental identification and can be assembled for pin or clip attachment. Kit is offered by **Anderson & Sons, Inc.,** N. Elm St. cor. Notre Dame, Westfield, Mass.

▲ For more details circle **NED-4040** on enclosed inquiry slip ▲

INTERNAL-EXTERNAL GRINDER has preselected speed range from 12,000 to 35,000 rpm

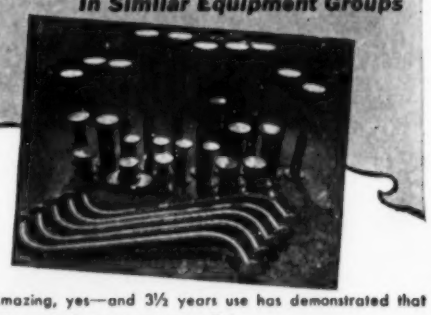


Holes with up to 3-in. diameters and maximum depth of 4 in. can be ground with model 84 hole grinder. Machine is also capable of external grinding to 3-in. diameters and 4-in. lengths. Machine has interchangeable motor-driven wheelheads for internal and external spindles and accommodates mounted or conventional wheels for preselected speeds from 12,000 to 35,000 rpm. Work head swivels 90 degrees for taper grinding, and micrometer table stop positions work for shoulder grinding.

Other features are lever closer for collets and step chucks, mechanical table travel with infinite speed and stroke adjustment within ¼ to 4-in. stroke, hand table travel with both coarse and fine feeds to 0.001-in. and hand infeed with coarse adjustment to 0.001-in. and fine to 0.0001-in. reductions of work diameter. Workhead has spindle mounted on precision ball bearings and has speeds of 200, 400 and 600 rpm. External wheelhead spindle is driven by built-in, balanced motor at 3450 rpm. Made by **Rivett Lathe & Grinder, Inc.,** Dept. NEP-2, Brighton 35, Boston, Mass.

▲ For more details circle **NED-4041** on enclosed inquiry slip ▲

Pipe Cost — $1,360 *Plus Installation*
Savings—Every Year—$8,000 *In Similar Equipment Groups*



Send for This Report

Details a case history on rubber lined pipe that applies to corrosion protection in any field. You will find it a thought-provoking text that may reveal ways you can use the services of our RUBBER ENGINEERS.

Amazing, yes—and 3½ years use has demonstrated that this saving is no temporary affair.

Many case histories have proven the merit of the La Favorite method of lining and/or covering pipe, valves, tanks and special equipment with exclusive La Favorite rubber compounds.

They have confirmed the value of this method of protection against corrosion and other destructive forces.

They show that it has SAVED countless thousands of dollars for users—and that is what counts!!!

Some of the Ways we are helping others

Made furnisher rolls for printing textiles, developed non-toxic white rubber linings for food processing equipment, constructed special rolls for the new non-contact printing process, devised static absorbing rolls, and provided many other specials for troubled production executives.

LA FAVORITE RUBBER MFG. CO.
273 Wagaraw Road · Paterson, N. J.
RUBBER LININGS • RUBBER COVERING • RUBBER ENGINEERING

▲ For more details circle **NED-4042** on enclosed inquiry slip ▲

You don't like to be a packhorse, do you?

Well, the deafened don't either. And, as a result, hearing aid makers have moved heaven and earth to make their instruments smaller and more compact. Yet more powerful!

Smaller hearing aids meant smaller vacuum tubes, of course. And smaller tubes *meant . . .?*

They meant problems! For inside these sub-miniature tubes are three tiny ladder-like grids where the softest whisper steps up to be amplified to scale the wall of silence. And these Lilliputian "ladders" are formed of microscopically fine wire. Wire nowhere near as thick as a human hair.

Now wire like this just doesn't come in any metal.

To get it, you've got to find a metal that (1) has the strength and ductility needed to be worked into such fine parts: that (2) has the electronic characteristics needed for tube elements.

Finding such a metal takes doing, you may be sure. But searching and testing intensively, the hearing aid makers *did* it: they found the solution to their problem in Inco's Pure Nickel.

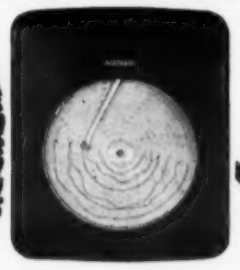
A Cue for You? Write for "Standard Alloys for Special Problems"—Summarizes the important facts and data on 12 INCO Nickel Alloys in one booklet. Gives a quick comparative guide to judge for yourself which alloy may be a ready answer to your problem, too.

It's yours for the asking.

THE INTERNATIONAL NICKEL COMPANY, INC.
69 Wall Street, New York 5, N. Y.

▲ For more details circle **NED-4043** on enclosed inquiry slip ▲

FAST!



6-Point Recording

ON A SINGLE ROUND CHART

THE NEW FOXBORO MULTI-RECORD DYNALOG* gives up to 6 clean-cut records in as many different colors on one convenient round chart . . . all, with *only one measuring system.* An ingenious, foolproof, record-switching arrangement provides recordings in sequence every 6 seconds. Colors positively will not run together. *Available with electric alarm or on-off control for individual points.*

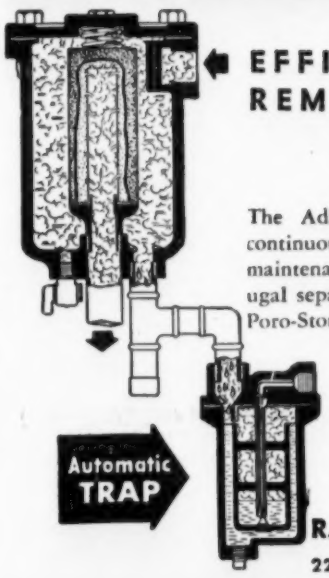
The unique Multi-Record Dynalog is available for measuring several temperatures or other process variables. Send for Bulletin 427-1 and see how this highly accurate electronic instrument provides new, money-saving advantages. **The Foxboro Company, 1345 Neponset Ave., Foxboro, Mass., U. S. A.**

**Reg. U. S. Pat. Off.*

Another FOXBORO *FIRST*
REG. U. S. PAT. OFF.

▲ For more details circle **NED-4045** on enclosed inquiry slip ▲

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:

OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle **NED-4046** on enclosed inquiry slip ▲

In the shop – in the field –

A new kind of lubricant

Moly-sulfide is a tenacious solid-film lubricant with remarkable properties under extreme pressure, high velocity and fretting conditions. Many new uses for *Moly-sulfide* are being found every day in the shop and in the field.

We have compiled 154 case-histories of successful applications of molybdenum sulfide to solve a wide range of industrial and technical problems; these are published in a form most useful to those who want practical information on what has already been accomplished by this new kind of lubricant.

Send for your free copy of *Moly-sulfide: In The Shop — In The Field*, a 40-page booklet of up-to-date information.

Moly-sulfide
A LITTLE DOES A LOT

SEND FOR THIS FREE BOOKLET TODAY

Climax Molybdenum Company
500 Fifth Avenue · New York City

MS 5

For more details circle NED-4047 on enclosed inquiry slip

BRASS

NEED METALS?

ALUMINUM STAINLESS STEEL COPPER INCONEL* NICKEL* MONEL* STEEL

Sheet, Plate, Tube, Pipe, Wire, Rod and Bar, Extrusions, Structural Shapes and Industrial Products.

Precision equipment for shearing and slitting

*Not stocked in Kansas City or St. Louis territories.

IN THIS AREA?

THEN CALL:

METAL GOODS CORPORATION

5239 Brown Avenue
St. Louis 15, Missouri
Telephone: GOodfellow 1234

or consult classified section of your telephone directory if you are in one of the 20 warehouse or sales service cities shown above.

For more details circle NED-4048 on enclosed inquiry slip

RED DEVIL SOLVES PACKING PROBLEMS PRONTO!

Shapes itself to the packing box, forming a perfect seal and packing!

Ideal for all types of valves, on vacuum and centrifugal pumps handling steam, brine, chemicals, freon gas, ammonia, oils, etc.

Eliminates the need for various sizes and shapes of ordinary packings.

SEND FOR FREE SAMPLE NOW!

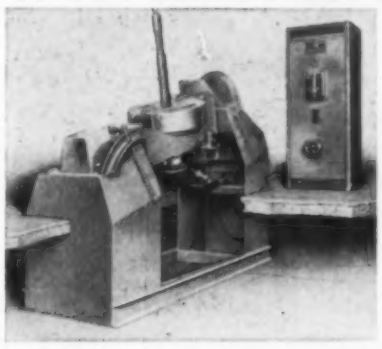
RED DEVIL PRODUCTS CO., Dept. NED
5129 N. Damen Ave., Chicago 25, Ill.

Please Send Free Sample of Red Devil Packing — Plus Descriptive Literature.

NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
MY SUPPLIER IS _____

For more details circle NED-4049 on enclosed inquiry slip

WELDING POSITIONER
rotates assembly 180 degrees for hand or automatic welding operations



Cradle of J-47 welding positioner is power rotated through 180 degrees so that welding can be performed on both sides of assembly. Positioner facilitates precision welding of turbine-bucket wheel to forged shaft of turbojet engine and keeps welded area at 600° F during welding operation by means of gas burners controlled by motor-operated gas valves and manually operated secondary air valves. An interlocking system of electric controls maintains ignition, firing and gas pressure.

Assembly is carried on an adjustable speed rotating spindle and is enclosed by power-operated insulated doors equipped with ports for welding. Operator has clear access to work, yet is protected from heat and splatter. Welding speed can be varied by means of gear reducer designed to withstand blows of chipping hammer without injury to gear train. Designed for hand welding, positioner is adaptable to automatic welding of any approved type. Made by **Syracuse Special Machine Co.**, 4020 Court St., East Syracuse, N. Y.

For more details circle NED-4050 on enclosed inquiry slip

OVERLOAD RELAYS
contacts operate with snap-action

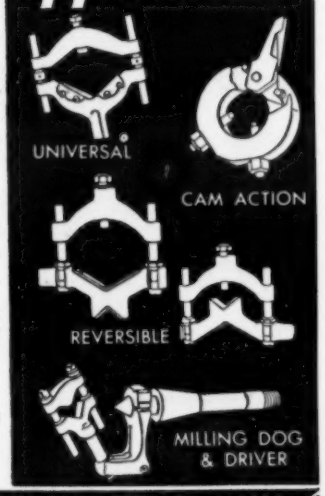
Independent thermal and instantaneous tripping elements are operated from one magnetic source in type ZTM thermal-magnetic overload relays designed for squirrel-cage, synchronous and wound-rotor motor starters and controllers. Thermal element provides timed-response to thermal energy of motor load currents by means of U-shaped bi-metal connected to secondary of magnetic circuit. On high current overloads, leakage flux across poles of magnet at primary coil end attracts armature to open instantaneous contacts and quickly disconnect starter from line. Relay contacts are silver and operate with snap-action. Thermal element has automatic reset contacts with hand reset contacts for instantaneous element. Any combination of automatic, hand or magnet re-set is optional. Relays are front connected and remove as unit from mounting base. Made by **Electric Controller & Mfg. Co.**, 2694 E. 79th St., Cleveland 4, O.

For more details circle NED-4051 on enclosed inquiry slip

RED-E

GRINDER-MILLING MACHINE DOGS

for EVERY application



● Special exclusive RED-E features mean unmatched versatility for ***GREATER SAVINGS*** in time, labor, money. Quick change-overs, simple installation, finger-tip control, perfect balance, accuracy and ***adjustability*** assure greater economy, micro-precision and stepped-up production that you can't afford to pass up!

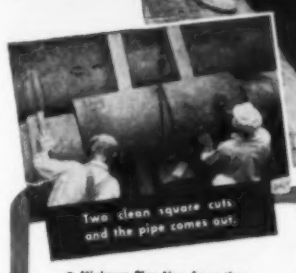
Complete range of sizes!
Send for the RED-E Bulletin, now!
GRINDER DOG *Specialists* Since 1908

RED-E TOOLS **READY TOOL COMPANY**
561 Iranistan Ave. Bridgeport 5, Conn.

For more details circle NED-4052 on enclosed inquiry slip

WACHS NATIONAL PIPE SAW

Tough Cuts MADE EASY



- Minimum Pipe Line down time.
- Cuts under water in flooded ditches.
- No broken pipe, milled cut.
- Thor Air-Powered, no flames near pipe.
- Set-up time about 15 minutes.
- Portable — weighs only 265 lbs. Two men can carry and set up unit.
- Small excavation — only 14" clearance needed.
- One machine cuts all pipe sizes from 10" to 48".

CUTS 10" TO 48" CAST IRON PIPE AND STEEL PIPE

● Many tough pipe cuts must be made during construction and for plant maintenance. This one portable machine will handle all your pipe cuts from 10" diameter and up. You will not only save time and labor, but you will get tight joints because of the square milled cut. The Wachs Pipe Saw also cuts cement lined pipe and makes beveled cuts on steel pipe. This machine often pays for itself on a single job.

Write today for descriptive illustrated folder.

THE E. H. WACHS COMPANY
Manufacturers of Engines, Valves and Machinery since 1893
1525 NORTH DAYTON STREET · CHICAGO 22, ILLINOIS

For more details circle NED-4053 on enclosed inquiry slip

Take Your Pick of Performance

In the complete Fairbanks-Morse Pump Line you can pick the pump that best suits your ideas of performance, efficiency, capacity, head, initial and operating costs. Whatever your choice, you can be sure it will more than live up to your expectations . . . it's Fairbanks-Morse.

For complete information, call your Fairbanks-Morse pump expert or write Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Ill.

FAIRBANKS-MORSE,
a name worth remembering

PUMPS • DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • SCALES • HOME WATER SERVICE EQUIPMENT • RAIL CARS • FARM MACHINERY • MAGNETOS

For more details circle NED-4054 on enclosed inquiry slip

SAFELY CLEAN MOTORS

& ELECTRICAL EQUIPMENT WITH FORMULA 602

SAFE ON WORKERS

Formula 602 reduces employee time-loss due to solvent toxicity. Formula 602 is really safe and efficient—use it to clean motors, generators, radio parts, coils, condensers, switches, transformers etc.

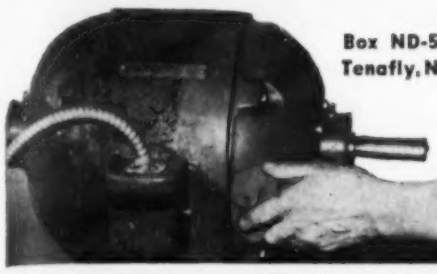
SOLVENT REPLACEMENT FOR CARBON TETRACHLORIDE

Eliminate the use of dangerous solvents! Formula 602 is designed to safely replace toxic solvents. It cleans instantly, dries rapidly without a residue and will not corrode metals. Formula 602 completely minimizes fire hazards and the dangers of dermatitis. Use it in wipe, dip or spray application—it's safe and effective for all your electrical equipment.

SEND FOR FULL INFORMATION!

the **PENETONE** *co.*

Box ND-552
Tenafly, N.J.



For more details circle NED-4055 on enclosed inquiry slip

Ear Protection by Kimball

A new ear protector made of finely woven, pliable wire mesh with soft plastic rims. Comfortable and close fitting. Without head band EP-1. With head band EP-2.

OTHER KIMBALL SAFETY PRODUCTS

EYE PROTECTION: Spectacle Goggles, Welding Goggles, Composition Goggles, Sideshields
HAND PROTECTION: GLOVES: Welder's, Asbestos, Steel Stitched. MITTENS: Welder's, Asbestos, Steel Stitched.
BODY PROTECTION: CLOTHING: Wool, Flame-Proofed Cotton. LEGGINS and SPATS: Leather, Asbestos, Flame-Proofed Cotton.
APRONS: Leather, Asbestos, Flame-Proofed Cotton.
HEAD PROTECTION: Masks, Helmets, Caps, Ear Protectors.
RESPIRATION PROTECTION: Respirators—All types for all Respiration Hazards.

Kimball SAFETY PRODUCTS COMPANY

9310 Wade Park Avenue • Cleveland 6, Ohio

For more details circle NED-4056 on enclosed inquiry slip

METAL DISINTEGRATION!

by THOMAS METALMASTER

TOOL STEEL CUTTING · TOOL & DIE REPAIRS · TAP REMOVAL · DRILL PULLING

WRITE TODAY!

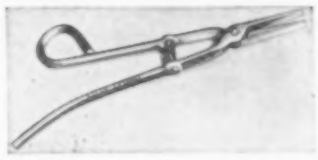
There's a technical engineer in your area that'll give an on the spot demonstration in your plant at your convenience.

WARNER DIVISION:
CLINTON MACHINE COMPANY
21535 GROESBECK HWY.
DETROIT 5, MICHIGAN

For further technical information relative to the famous Thomas Metalmaster Disintegrators write to the main office listed above and prompt service will be given your inquiry.

For more details circle NED-4057 on enclosed inquiry slip

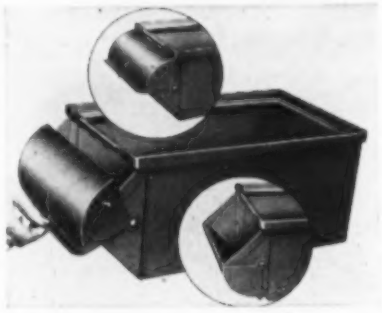
SAFETY TONGS made of drop forged steel



Removing blanks from presses, selecting and removing single sheets from a pile, handling hot parts and lifting parts from solutions are among uses for drop forged steel safety tongs. They have long, broad nose member for firm gripping. Nose can be spread or reshaped by heating for handling special shapes. Tool is available with a guard over the spring for index finger guiding. Made by **Atlas Welding Accessories Co.,** 707 Lewiston St., Ferndale 20, Mich.

For more details circle NED-4058 on enclosed inquiry slip

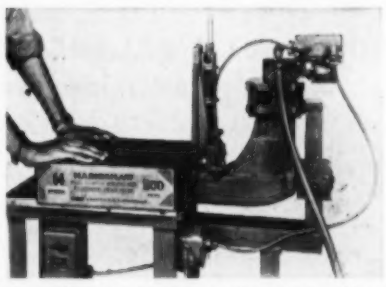
HOODED STACKING PARTS BIN prevents spilling of parts



Small parts and materials carried in this hooded Stackbin are protected from dust and can be handled on trucks or inclined conveyors without spilling. Hood is securely fastened in closed position by positive latch, easily released by light finger pressure. Built of heavy sheet steel and angle iron, Stackbins tier securely for storage or assembly. Standard sizes range from 3½ x 6 x 3¼ in. to 15 x 24 x 11 in. Full width hoppers and smooth interiors assure maximum speed in handling parts. Made by **Stackbin Corp.,** 1081 Main St., Pawtucket, R. I.

For more details circle NED-4059 on enclosed inquiry slip

AUTOMATIC STAPLING MACHINE is adjustable for concealed stapling



An automatic model of the retractable anvil carton stapling machine, designated as TH1-HAS, is air operated and functions when operator presses carton against stapling head. Machine is recommended for closing overlap cartons and end closure on long narrow cartons of either overlap or slotted type. Stapling of filled cartons, fiber or corrugated, is done from outside the carton. When adjusted for concealed stapling, staple penetrates approximately two-thirds of the way through carton wall and is clinched. Closures meet requirements of Consolidated Freight Classification and have approval of Post Office Department. Assembly is mounted on standard flat top stainless table designed to accommodate cartons of various sizes. Operation requires 60 psi air pressure. Made by **International Staple & Machine Co.,** 802 E. Herrin St., Herrin, Ill.

For more details circle NED-4060 on enclosed inquiry slip

DESIGN DATA

OF INTEREST TO EVERY HYDRAULIC, MECHANICAL AND ELECTRICAL ENGINEER

Design refinements to assure maximum operating efficiency merit study of Sperry Hydraulic Remote Controls. Available in standard and special types for use with feed, valve, throttle, governor, variable speed and clutch controls.

WRITE TODAY

SPERRY Products, Inc., Danbury, Conn.

☐ Send Hydraulic Control Folder
☐ Have Representative Call

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COMPANY.....
CO. ADDRESS.....
CITY..... ZONE..... STATE.....

For more details circle NED-4061 on enclosed inquiry slip

"A Street Car Named Desire" was FIRST operated by a Trolley

. . . later it became famed as a smash hit of stage and screen. Leaving nothing to "Desire" is the

Rivetless Chain Trolley Conveyor

another FIRST by JERVIS B. WEBB COMPANY

Simple and efficient is the Webb Trolley Conveyor. Its 2 wheel trolleys are suspended on an overhead I-beam track and connected by a rivetless chain which serves the double purpose of spacing and driving the trolleys. Webb Trolleys are so simple to assemble to the I-beam or to dismantle that skilled labor is not required. Trolleys are arranged for pressure gun lubrication. Their triple labyrinth seal has 3 walls of steel to keep lubricant in and dirt out. Brackets are drop-forged with hardened steel wheels. Races are precision ground. Due to the lower friction with retainer type bearings the life is longer. The Drop-Forged Rivetless Chain has been designed and perfected by the Jervis B. Webb Company specifically for Trolley Conveyor Systems.

CONVEYOR ENGINEERS AND MANUFACTURERS

JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES

FACTORIES IN DETROIT . . . LOS ANGELES . . . HAMILTON, ONT.

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Cottons, Nylons and other Synthetics

MADE TO GOVERNMENT SPECIFICATIONS

Reeves offers a wide range of fabrics adaptable to many industrial uses. If your industry has problems involving the use of fabrics, Reeves can help you solve them. Write or call now.

REEVES BROTHERS INC.
W. Harris Thurston Division
54 Worth Street, New York 13, N.Y.

For more details circle NED-4063 on enclosed inquiry slip

DUPOR No. 46

U.S.B. of M. APPROVED RESPIRATOR FOR TYPE "A" AND LEAD DUSTS

More than 46 sq. in. filtration area. Soft rubber face mask. U.S.B. of M. Approval BM-2124 for LEAD Dusts and ALL other toxic or poisonous dusts as well as Type A (Pneumoconiosis or Silicosis producing dusts). Unit has exclusive controlled breathing valves to guard against stale air. Maximum visibility—no interference with goggles or glasses.

Sample sent $3.25 pp

H. S. COVER
South Bend, Ind.

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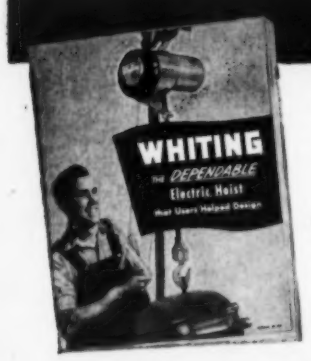
LIFT at Lowest Cost!

GET THIS BOOKLET FOR FACTS ON THE HOIST THAT WILL SERVE YOU BEST!



Read *why* the Whiting Electric Chain Hoist is the *lowest* in operating cost . . . *why* it is the *safest* hoist and the *easiest* to operate. And read about the *exclusive* Whiting Warranty Plan, too. All this information, plus data on models and capacities is contained in Bulletin H-112. Write for a free copy now!

WHITING CORPORATION 15660 Lathrop Ave. • Harvey, Illinois

WHITING ELECTRIC CHAIN HOIST

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Job-Proven

PLASTIC ROCK FLOORS

Save priceless production time! Renew old floors over the week-end to last for many years. Heavy traffic only packs denser. Non-skid, noiseless, spark-proof; bonds and feather-edges perfectly on concrete, wood or steel. Each Plastic Rock unit is complete; nothing else to buy; no guesswork; maintenance crew or contractor can apply.

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UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

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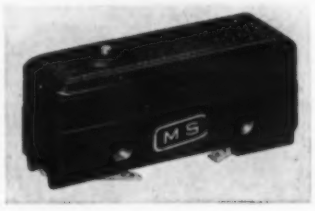
FOG NOZZLES are lightweight and nonclogging

Small in size and lightweight, AA series of stainless steel fixed installation fog nozzles is designed for industrial processing and fire protection equipment. Nozzles employ spiral principle of atomization, are nonclogging and easy to clean without removing them from the installation. They are available in six models and three flow rates, ranging from 1 to 10 gpm and with full or hollow cone fog pattern. A ¼-in. male pipe thread connection is standard, with ⅜-in. thread available on special order. Made by **Bete Fog Nozzle Inc.**, 85 Pierce St., Greenfield, Mass.

▲ For more details circle NED-4067 on enclosed inquiry slip ▲

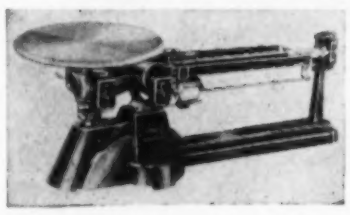
SNAP-ACTION SWITCH is make-before-break type



Continuity of performance in a multistage machine whose sequential operation is controlled electrically is assured with use of series BZ-2G pin plunger-actuated Micro Switch of the make-before-break type. Switch serves timing applications where means of actuation is extremely slow and an overlap in circuits is desired. Design incorporates two moving contact springs adjusted in such a way that depression of plunger actuates lower contact from 0.005 to 0.010-in. before upper one. In this momentary interval both normally-open and normally-closed circuits are closed to provide make-before-break action of contacts. Switch is rated at 10 amp on 125, 250 or 460 v ac; resistive load, ½-amp 125 v dc; and resistive load, ¼-amp 250 v dc. Made by **Minneapolis-Honeywell Regulator Co.**, Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

▲ For more details circle NED-4068 on enclosed inquiry slip ▲

TRIPLE BEAM BALANCE features undivided tare beam



An undivided tare beam to compensate for container weight is a feature of this triple beam balance. Need for further calculations is eliminated as empty container is balanced by use of the tare poise which can be locked on the undivided tare rod for repetitive weighings. The value read on the balance after filling the container thus represents only the materials in the container. Balance has stainless steel plates and etched stainless steel beams. It has full load capacity of 2610 grams with a sensitivity of 1/10-gram. Standard metric balance, or optional avoirdupois or troy standards, are available. Various weighing platform types are also available. Made by **Ohaus Scale Corp.**, Dept. N, 1050 Commerce Ave., Union, N. J.

▲ For more details circle NED-4069 on enclosed inquiry slip ▲

BUSCHMAN CONVEYOR CUTS ASSEMBLY COSTS 50%

for automotive transmission builder

More than a year's use shows that a Buschman Roller Conveyor has cut approximately 50% in assembly costs for a noted transmission manufacturer. "Very satisfied with the installation," the user reports that the conveyor is flexible, permits time-saving straight line assembly never possible before.

There's a Buschman Conveyor to move practically any part or product faster, easier and at lower cost. Find out why users in every industry say Buschman Conveyors are "Better Built . . . A Better Buy." Write for literature: Catalog 60—Roller Conveyors or Catalog 400—Complete Conveyor Line.

The E. W. BUSCHMAN Co.
Spring Grove at Winton Place
Cincinnati 32, Ohio

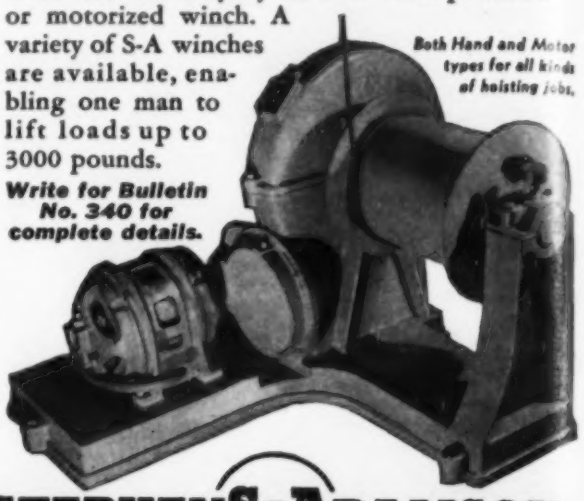
PRODUCE MORE . . . FOR LESS
Buschman Conveyors

▲ For more details circle NED-4070 on enclosed inquiry slip ▲

S-A WINCHES SAVE TIME and MANPOWER

There are many lifting and pulling jobs around a plant which can be handled quickly, safely and more economically by an S-A hand-powered or motorized winch. A variety of S-A winches are available, enabling one man to lift loads up to 3000 pounds.

Write for Bulletin No. 340 for complete details.



Both Hand and Motor types for all kinds of hoisting jobs.

STEPHEN S-ADAMSON MFG. CO.

Tellevel-Bin Level Controls · Saco Speed Reducers · Car Loaders · Car Pullers · Winches · SealMaster Ball Bearings

12 RIDGEWAY AVE., AURORA, ILLINOIS

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"Weld-Bilt" EQUIPMENT GIVES YOU LONGER SERVICE IN LABOR-SAVING MATERIALS HANDLING

You can SEE the greater strength and durability in WELD-BILT Equipment . . . in heavier arc-welded construction, in sturdier operating parts, in many innovations that assure easier, friction-free operation. Every piece of "Weld-Bilt" equipment is designed to save operator fatigue, protect product and save money both on original cost and maintenance expense.

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Write or wire for prices today . . . or for engineering assistance on your handling problems or plans.

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MATERIALS HANDLING ENGINEERS
311 Water Street, West Bend, Wisconsin

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Your Workers Look to You For *Sure* Eye Protection

Give Them WATCHEMOKET eye SAVERS

Supply your workers with Eye-Savers — the finest in plastic eye protection! Eye-Saver shatterproof lenses have great impact strength and are optically perfect to give *sure* eye safety. Workers especially like the light, comfortable fit and good looks of every Eye-Saver goggle. Available from your safety supplier in many different styles to meet all eye hazards. Model 7 (illustrated) has become the standard of industry for heavy duty applications.

FREE! *Send for magazine article giving impartial advice on best uses of plastic eye protection. Eye-Savers catalog also included.*

WATCHEMOKET OPTICAL CO., INC.
DEPT. 7, PROVIDENCE, RHODE ISLAND
Producers & Originators of Practical Plastic Eye Protection

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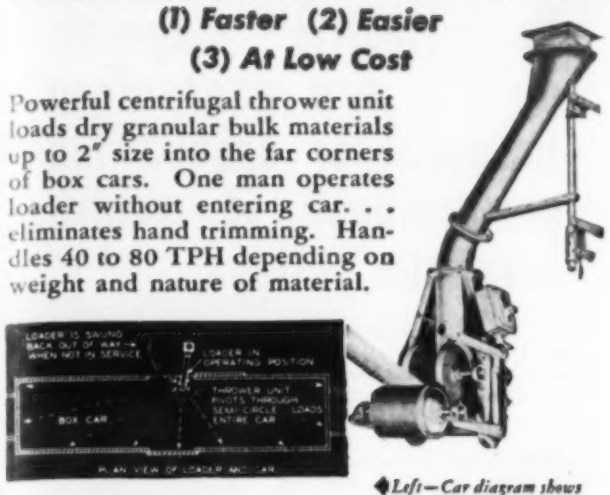
SWIVELOADER

Loads Bulk Materials Into Box Cars

(1) Faster (2) Easier
(3) At Low Cost

Powerful centrifugal thrower unit loads dry granular bulk materials up to 2" size into the far corners of box cars. One man operates loader without entering car. . . eliminates hand trimming. Handles 40 to 80 TPH depending on weight and nature of material.



Left—Car diagram shows how SWIVELOADER loads material into ALL parts of car from doorway.

Write for BULLETIN No. 1046

STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level Controls · Car Loaders · SealMaster Ball Bearings · Car Pullers · Winches · Variable Speed Reducers · Saco Speed Reducers

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For more details circle NED-4074 on enclosed inquiry slip

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SAFETY-TRAFFIC LINES

The New, The Modern Way With A UNIVERSAL CONTROLLED-FLO TRAFFIC-LINE PAINT-STRIPER

The REVOLUTIONARY Machine That Does the Job Better, Cheaper, Simpler Because of its UNIQUE, ALL-METAL, SLED-TYPE, ROLLER SPREADER.

NO BRUSHES! NO FUEL!

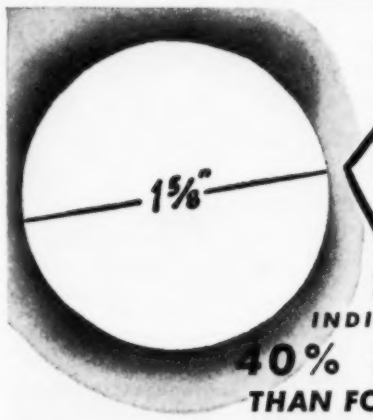
Protects You Against Mounting Shortages!

WRITE TODAY FOR FREE DESCRIPTIVE LITERATURE.

PAINT Complete Line of Zone or Striping Paint For Any Machine.

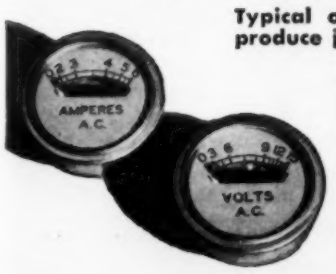
UNIVERSAL YONKERS CORPORATION
LINE MARKER DIVISION
Ashburton Ave. & Alexander St. YONKERS 2, N. Y.

For more details circle NED-4075 on enclosed inquiry slip



YOU NEED ONLY THIS SIZE SPACE FOR STERLING INDICATING METERS

40% SMALLER THAN FORMER MODELS



Typical of Sterling's ability to produce just the right meter for your needs at moderate cost is this new small unit for A-C or D-C service. Available in ranges of 1 to 50 V, 1 to 30 amp, and 10 to 1,000 milliamperes—with high readability and accuracy. In dull, black, wrinkle or nickle finishes. Write today for complete facts.

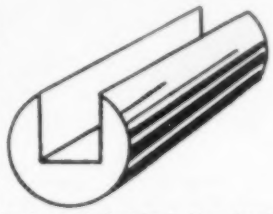
Send for a Sterling catalog today — a complete line of meters for the electronic and automotive field.

STERLING MANUFACTURING COMPANY
9202 DETROIT AVE.
CLEVELAND, OHIO

For more details circle NED-4076 on enclosed inquiry slip

SQUARE SLOT SLEEVES
fits square tool in round hole

By fitting square slotted sleeves in round holes, time and money can be saved in processing boring bars, cutter heads and tool holders for accurate work. To install square slot sleeves, one hole the size of the sleeve is reamed part way through the bar and the sleeve held in place by a pin. It can be soft soldered or brazed in place for permanent installation. Two more holes are drilled and tapped: one to hold the tool in place and the other as an adjustment behind the tool itself. Variety of sizes for most applications are available. Made by **Formed Tools Co.**, 43047 Grand River, Novi, Mich.



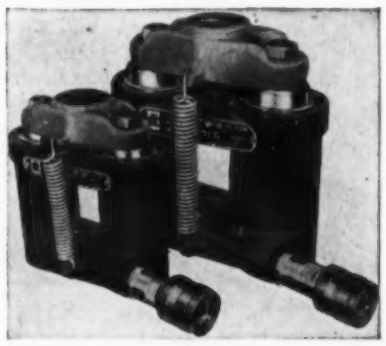
For more details circle NED-4077 on enclosed inquiry slip

MOBILE POWER SCOOP
¾-yd model has 4000-lb capacity

Up to 120 yd of bulk material can be handled in 1 hr with this hydraulic actuated model H Scoopmobile. It is equipped with ¾-yd scoop and has rated lifting capacity of 4000 lb. Standard discharge is 8 ft. Full vision is afforded operator from a safe, enclosed cab. In addition to handling coal, sand, gravel and earth, machine is adaptable for backfilling and leveling operations. Standard features of Vickers hydraulic steering and planetary drive contribute to maneuverability. Optional accessories include swivel type concrete hopper, lift forks, fertilizer or hay fork, and crane boom. Made by **Mixermobile Manufacturers**, 8027-A N. E. Killingsworth St., Portland, Oreg.

For more details circle NED-4078 on enclosed inquiry slip

HYDRAULIC RAM
30-ton model weighs 23 lb



Operating in any position, the 30-ton Power-Twin hydraulic ram (right) is fully adjustable, eliminates torque and facilitates pulling and installing operations. Unit weighs 23 lb and has center hole construction. This unit and the previously announced 17½-ton ram (left), operate from the same size pump which is remotely controlled for safety. Sets of attachments are available for use on industrial tractors, earthmoving equipment, for plant maintenance and various pulling and installing operations. Made by **Owatonna Tool Co.**, 436 Cedar St., Owatonna, Minn.

For more details circle NED-4079 on enclosed inquiry slip

won't this add more GO to your product?

GEIGER-KNIGHT PATENTED CASTERS

U.S. PAT. NO. 2332089
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There *is* a different caster—proved and tested for years. It's standard equipment for many products—from heavy portable units (top right) to light cleaners' racks (bottom right).

This caster—the Geiger-Knight—rolls easier, turns easier, lasts longer than standard casters.

Maybe it's just the thing for the new product you are planning . . . or for the product you're seeking to improve.

See the different styles of this Caster. See how others have used Geiger-Knight Casters so successfully.

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GEIGER PRODUCTS
Manufactured by CLINTON PRODUCTS CO.
295 Tecumseh Road • Clinton, Michigan

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MILLIONS

IN STOCK FOR IMMEDIATE DELIVERY

all popular sizes with nuts. Steel or brass, slotted or Phillips head. Maximum discounts.

Write—Wire—Or Phone!

STERLING BOLT CO.
389 WEST ERIE STREET • CHICAGO 10, ILLINOIS
Telephone: SUperior 7-3000 Teletype: CG 488
Cincinnati, Indianapolis, Milwaukee, St. Louis

For more details circle NED-4081 on enclosed inquiry slip

- To Electronic Length Sorter
- Single File
- In Oriented Position
- Automatically

SYNTRON "Vibra-Flow"

PARTS FEEDERS

Let controlled vibration feed your small, medium or large parts . . . single file . . . in oriented position . . . at variable rates . . . without damage . . . to your inspection and counting devices and other automatic processing equipment.

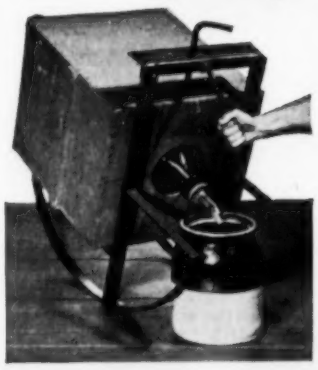
Catalog data upon request. Or send details of your problem along with sample parts to . . .

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-4082 on enclosed inquiry slip

An Acid Splash is always costly

Even though it does no physical damage it still is wasteful . . . takes time and effort to neutralize and clean up.



pour safer pour faster

The G S SAFTEE-FLO Carboy Tilter eliminates splashing, spilling, damage, waste and possible injury. Rugged steel frame. Acid resistant vented pouring spout. Smooth flows up to 5 gpm.

GS Type 11 Tilter with Saftee-Flo Spout **$24.95**
GS Pouring Spout only **$4.95**

Hundreds of safety equipment items are illustrated, described and priced in the big new General Scientific Catalog.
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ORDER TODAY DIRECT—ALL ORDERS SHIPPED PROMPTLY FROM PHILA.

GENERAL SCIENTIFIC EQUIPMENT CO.
2701 W. HUNTINGDON ST., PHILADELPHIA 32, PA.

SAFETY EQUIPMENT FOR EVERY HAZARD

For more details circle NED-4083 on enclosed inquiry slip

Type 631-B Strobotac ... $140.

MOTION ANALYZER

The Strobotac is a generator of short duration, high intensity light flashes, the rate of which can be controlled by turning a knob calibrated to read in rpm. It is portable, inexpensive, light weight and very easy to operate.

HERE'S WHAT THE STROBOTAC CAN DO FOR YOU

- Enables the examination of a machine's exact operation while the machine is actually running at normal speed
- Makes a machine or any of its parts appear to stop at any point of its cycle, or appear to move slowly through its cycle
- Serves as a direct-reading electrical tachometer between 600 and 14,400 rpm. It can "stop" motion from 600 to 100,000 rpm. It requires no electrical or mechanical contact between the machine and the Strobotac
- Permits study of gear meshing, belt slippage, crankshaft and piston motion, or any rotating, vibrating or reciprocating movement
- Enables checking machines for maintenance purposes
- Invaluable in all stages of design, development, maintenance and sales

For complete information ask for EYES FOR INDUSTRY

GENERAL RADIO Company 275 Massachusetts Ave. Cambridge 39, Mass.
90 West St. NEW YORK 6 920 South Michigan Ave. CHICAGO 5
1000 North Seward St. LOS ANGELES 38

For more details circle **NED-4084** on enclosed inquiry slip

C-D-F MAKES IT...

The Spool that keeps its HEAD!

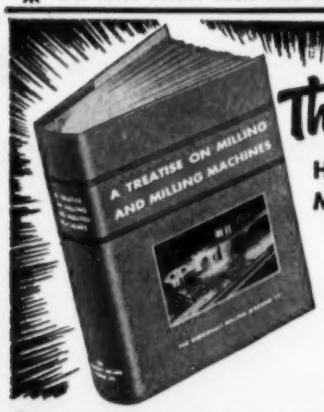
A radio coil manufacturer wanted small spools, less costly than those machined down from round stock, much stronger than molded bobbins. C-D-F supplied this:

A rolled Dilecto tube is grooved on one end . . . stepped down in the middle . . . then notch cut on the other end for a flush fit. C-D-F uses a special adhesive to bind the three parts (the body and two Dilecto spool heads) together. The assembly is sufficiently strong to withstand the outward pressure of the wire. The spool never loses it's head! Because Dilecto is resistant to high heat, excessive humidity, many corrosive and chemical actions, it can be used for many coil and electronic applications.

Engineers . . . if you need fabricated parts, special laminated and molded plastics, Micabond and Teflon tapes and sheets . . . C-D-F can help you. Write today for Dilecto catalog, name of your C-D-F sales engineer.

Continental-Diamond Fibre Company
NEWARK 30 DELAWARE

For more details circle **NED-4085** on enclosed inquiry slip



This New Book

HELPS YOU IMPROVE MILLING MACHINE PERFORMANCE

896 pages of text...200 Formulae...700 Illustrations and Charts...6¼" x 9¼" case bound.

PRICE $8.00

Everyone interested in metal-working should have a copy because it's the most informative book ever written about milling and milling machines. Covers the entire field from elements of machine construction to the economics of replacement. Fill in the coupon and mail it today. Enclose check or purchase order. THE CINCINNATI MILLING MACHINE CO., CINCINNATI 9, OHIO.

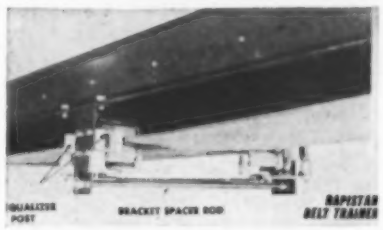
THE CINCINNATI MILLING MACHINE CO.
DEPT. ED, 4701 MARBURG AVE., CINCINNATI 9, OHIO

Please send_____copies of "A TREATISE ON MILLING AND MILLING MACHINES" at $8.00 each (postage, sales and local taxes included).

NAME_____
(Please Print)
COMPANY_____
STREET AND NO._____
CITY_____ZONE_____STATE_____

For more details circle **NED-4086** on enclosed inquiry slip

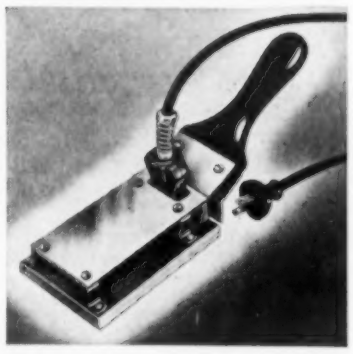
CONVEYOR BELT ALIGNER
usable on practically any conveyor



Positive action of this belt trainer automatically keeps wandering conveyor belts aligned. It can be installed on any make of conveyor that has return belt exposed beneath the bed and that uses fabric or rubber covered belts 3/16-in. or more thick operating at speeds up to 200 fpm. Device does not interfere with normal operation and cannot harm belt. It is bolted to flanged rails on underside of conveyor. Any tendency of belt to creep to either side is corrected instantly. Made by **Rapids-Standard Co.**, Dept. BT, 342 Rapistan Bldg., Grand Rapids 2, Mich.

For more details circle **NED-4087** on enclosed inquiry slip

ELECTRIC PAINT REMOVER
blisters paint for easy removal

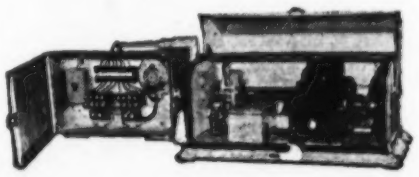


Plugged into any 110-v electric socket, Mr. Blister paint remover also speeds removal of wall paper and putty. The 1000° F heater element has 20 sq in. of heating surface which blisters multiple layers of paint so that they can be scraped cleanly from surface with a putty knife. Up to 2 sq ft of paint can be removed in 1 minute. Uneven surfaces such as moldings can be cleaned with wire brush after tool heats paint. List price is $10.95. Made by **B & L Tool & Machine Co.**, 38 "DD" East St., Plainville, Conn.

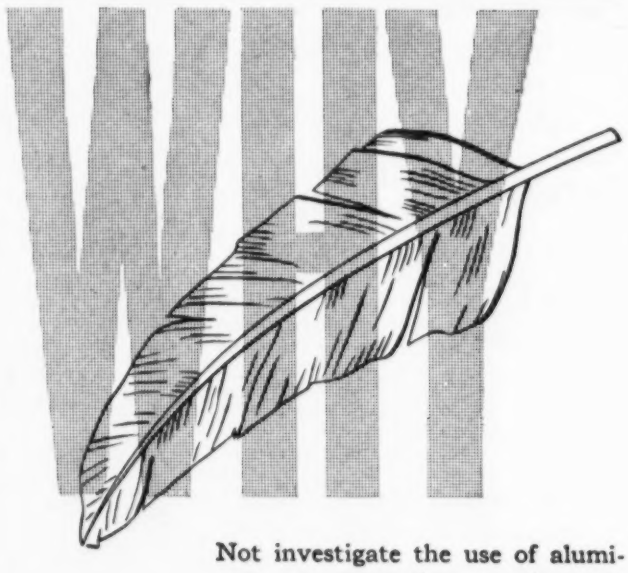
For more details circle **NED-4088** on enclosed inquiry slip

SAMPLING MACHINE
adaptable to solids and liquids

By taking a right angle cut, the Galigher Junior sampler for application (with correct cutter arrangement) to flow of solids or liquids takes equal percentages from all parts of the stream. The interval between the cuts is constant. With timer control, cuts can be made as frequently as required. The cutter is designed for the best control of the type of material to be sampled. The automatic machine, offered as a packaged unit, can be used to operate several gang samplers simultaneously. Compact design allows use under conditions of limited headroom. Cutter stroke is up to 12 in. and approximate dimensions are 12¼ x 24¾ x 8½ in. Made by **Galigher Co.**, 547 W. Eighth South St., Salt Lake City 4, Utah.



For more details circle **NED-4089** on enclosed inquiry slip



Not investigate the use of aluminum or magnesium castings on *your* product?

Almost a half-century of experience producing quality Well-Cast light metal castings in sand, semi-permanent and permanent mold-Well-Made Wood and Metal Patterns.

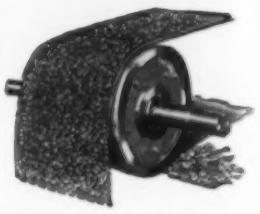
THE WELLMAN BRONZE & ALUMINUM CO.
DEPT. 15, 12800 SHAKER BLVD., CLEVELAND 20, OHIO

For more details circle **NED-4090** on enclosed inquiry slip

GUARANTEED!

HOMER permanent "non-electric" magnetic pulleys are guaranteed to equal or exceed the performance of electro magnetic pulleys

With HOMER non-electric Permanent Magnetic Pulleys, you eliminate Power Failures; Burn-Outs; Atmospheric and Temperature restrictions; Wet or Dry locations, because HOMERS are not affected by these natural elements. Homers are available for light, standard or heavy-duty service. Write today for bulletins describing this line of GUARANTEED HOMER MAGNETIC PULLEYS.

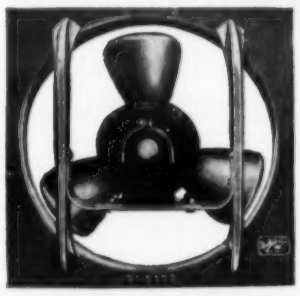


The HOMER MANUFACTURING CO., Inc.
DEPT. 1-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

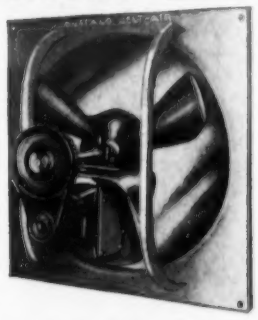
For more details circle **NED-4091** on enclosed inquiry slip

Give 'Em the Fresh Air THEY NEED for PRODUCTION!



"BUFFALO" BREEZO

Here's the fan you can install cheaply almost anywhere you need circulation. Low in first cost, Breezo Fans require no attention except lubrication. 5 sizes, 8" to 24" (up to 5500 cfm), all of rigid, strong, die-stamped square frames and properly shaped blades. Widely used for area or supplemental ventilation.



"BUFFALO" BELT-AIR

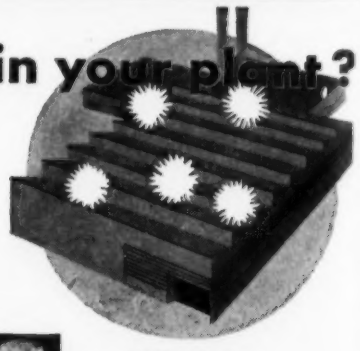
—extremely quiet, efficient propeller fans that save money in trouble-free performance as well as purchase price. In 24" to 48" sizes, handling up to 19,000 cfm. WRITE FOR BULLETIN 3222-F, which describes these and other "Buffalo" fans.

BUFFALO FORGE COMPANY
215 Mortimer St., Buffalo, New York
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Sales Representatives in all Principal Cities

"Buffalo" DISK FANS

For more details circle **NED-4092** on enclosed inquiry slip

hot spots in your plant?



specify ***REFRASIL***

Play safe! Use REFRASIL to eliminate dangerous "hot spots" in your plant. REFRASIL provides a temperature drop from 1200°F. to 300°F....½" foil blanket withstands sustained exposure to extreme temperatures. REFRASIL is easy to install — easy to remove. So play safe — specify REFRASIL for your high temperature insulation problems.

REFRASIL, light in weight and versatile in use, is available in a variety of physical forms to meet virtually any insulation need—see illustrations at right.

use *REFRASIL* for...

- Ducts carrying high temperature liquids. (Refrasil Blankets)
- Electric ovens. (Refrasil batt or bulk fibers)
- Laboratory Equipment. (Refrasil cloth and batt)
- Thermocouple wires. (Refrasil sleeving)
- Filtration. (Refrasil bulk fibers)

REFRASIL REPRESENTATIVES:

Eastern:
Fred W. Muhlenfeld
6659 Loch Hill Rd.
Baltimore 12, Md.—Valley 3135

Texas, Okla. & Kansas:
Thomson Engineering Service
708 Hemphill St.
Fort Worth 4, Texas—Fortune 5340

Midwest:
Burnie L. Weddle
3219 West 29th St.
Indianapolis 22, Ind.—Hickory 8685

CONSULTATION SERVICE
Attach this ad to your letterhead and mail to nearest REFRASIL *Representative for consultation service—at no charge.*

HITCO
THE H. I. THOMPSON COMPANY
1739 CORDOVA STREET
LOS ANGELES 7, CALIF.

For more details circle **NED-4093** on enclosed inquiry slip

MAXI-PICH SHEAVES

four reasons why—

YOU SHOULD DEMAND

"V-BELT" MAXI-PICH Stationary & Motion Control Sheaves

They're engineered for rugged performance from best grades of heat-treated steel and soft-gray iron castings.

You get every advantage of other sheaves plus these 4 outstanding features—

1. MAXIMUM PITCH DIAMETER VARIATION
2. CONSTANT BELT ALIGNMENT
3. INTERCHANGEABLE BUSHINGS
4. USES COMMERCIAL V-BELT AND COMPANION SHEAVE

"V-Belt" Maxi-Pich Sheaves fit any factory machine—save installation and operating costs—speed production. For the FULL STORY, ask your "V-Belt" dealer, or write to the V-Belt Engineering Co., Richmond, Va.

V-BELT ENGINEERING COMPANY
RICHMOND, VIRGINIA

▲ For more details circle NED-4094 on enclosed inquiry slip ▲

Here's the profitable answer to many filtering problems

Illustrated is portable unit; stationary units also available

NUGENT
Packaged
Filtering Units

For large garages, machine shops, engine rooms, electroplating plants, etc., complete, compact Nugent Filtering Units will often pay for themselves in oil savings in a very short time. Consisting of a motor, pump and filter assembly these units can be hooked up to clean oils, and liquids in all types of containers. Filtering can be done either by the batch or by continuous circulation. Capacities from 0.8 gpm to 22.5 gpm. Portable or stationary models are available. Write for full details and descriptive literature.

Wm. W. *Nugent* & Co., Inc.
421 N. Hermitage Ave. CHICAGO, 22, ILLINOIS
Est. 1897

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . *Representatives in Principal Cities*

▲ For more details circle NED-4095 on enclosed inquiry slip ▲

SPEED UP/ *with* HANSEN

THE TACKER IT PAYS TO USE!

SAVES

TIME in all types of tacking and fastening. Fast, easy one-hand operation. Take-up Jaw speeds results and permits instant inspection and on-the-job service. Quick assembly and disassembly without tools.

STEPS. Self-contained. Ready for instant, continual use. Staple supply as near as vest pocket with Hansen Vest-Kit—for quick refills. No back-tracking.

MATERIALS. Precision, accurate driving due to balanced design assures economical and efficient use of all materials.

36 MODELS — 80 STAPLE SIZES

REQUEST BOOKLET

A.L.HANSEN MFG.CO.
5164 RAVENSWOOD AVE. CHICAGO 40 ILLINOIS

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DRY FILM THICKNESS GAGE checks finishes and sheet materials

Paint, varnish, lacquer, rubber, textiles, ceramics, mastics, plastics, paper, plating and other sheet-like materials can be checked for thickness with this British-made Elcometer dry film thickness gage. It measures and records thickness of areas which cannot be seen and is self-contained and portable. Accuracy in measuring nonmagnetic, protective and decorative coatings is within 0.0001-in. Device can also be used on production lines at any point on large or small areas. Scale ranges of 0-2, 0-3, 0-5, 0-10, 0-20, 15-40 and 40-80 mils and 0-¼ and 0-¾-in. are available. List price complete with shims and leather case is $58. Distributed by **Henry A. Gardner Laboratory, Inc.,** 4724 Elm St., Bethesda 14, Md.

▲ For more details circle NED-4097 on enclosed inquiry slip ▲

PLASTIC POCKET PROTECTOR holds clipped pencils and rulers

Made of heavy cellulose acetate plastic sheet, Pocket Saver measures 3¼ x 6 in. and will fit practically any pocket. Small flap overlaps outside of pocket to protect material from pen, pencil or other clips commonly used to hold them in pocket. Unit prevents ink stains and pencil marks on clothing. It also prevents puncturing of pocket by pencil point, ruler or other sharp instruments. As an advertising specialty, protector can be supplied in quantities and imprinted with any desired message. Free sample is available. Made by **American Kleer-Vu Plastics, Inc.,** 47 Thames St., Brooklyn 6, N. Y.

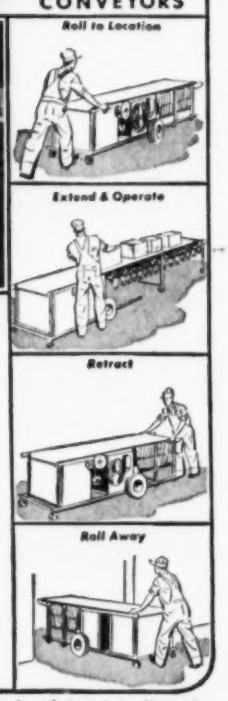
▲ For more details circle NED-4098 on enclosed inquiry slip ▲

PORTABLE CALCULATOR hand size unit totals to 99 million

Operating as easily as a slide rule, Curta portable calculator will add, subtract, multiply, divide, determine square roots, factors, cubes and percentages. This accurate device carries to five decimal places and totals to 99 million. Figures can be checked and rechecked on three sets of dials. The 8-oz, hand-size calculator, a Swiss product, is offered with rubber-lined metal case for $129. Available from **Curta Calculator Co.,** Dept. N, 5543 S. Ashland Ave., Chicago, Ill.

▲ For more details circle NED-4099 on enclosed inquiry slip ▲

MODERN TIME AND COST SAVERS BUILT BY... *Standard* GRAVITY & POWER CONVEYORS



SAVE TIME LOADING — UNLOADING WITH THE

E-X-T-E-N-D-O-V-E-Y-O-R

This compact, mobile, easily maneuverable power-belt conveyor unit extends to 46 ft. in either direction and retracts to 9 ft. 10 in. Reaches into cars, trucks, trailers. Handles boxes, bags, bundles, cartons, crates, cases weighing up to 150 lbs. Available in two models—1 way stretch and 2 way stretch—and 4 sizes. Write for Extendoveyor Bulletin—address Dept NED-52.

STANDARD CONVEYOR COMPANY
General Offices: North St. Paul 9, Minn.
Sales and Service in Principal Cities

▲ For more details circle NED-4100 on enclosed inquiry slip ▲

Chip Away... PAINT RUST SCALE

with AURAND CLEANING TOOLS

Clean off accumulations of scale, paint, rust or any foreign matter from any hard surface with Aurand Cleaning Tools. Toothed cutting wheels, loose pinioned on rotating head chip away accumulations at high speed. Positive depth shoe prevents cutting into permanent surface and assures uniform cleaning of entire area.

Two sizes in electric or pneumatic models.

For full details, write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

▲ For more details circle NED-4101 on enclosed inquiry slip ▲

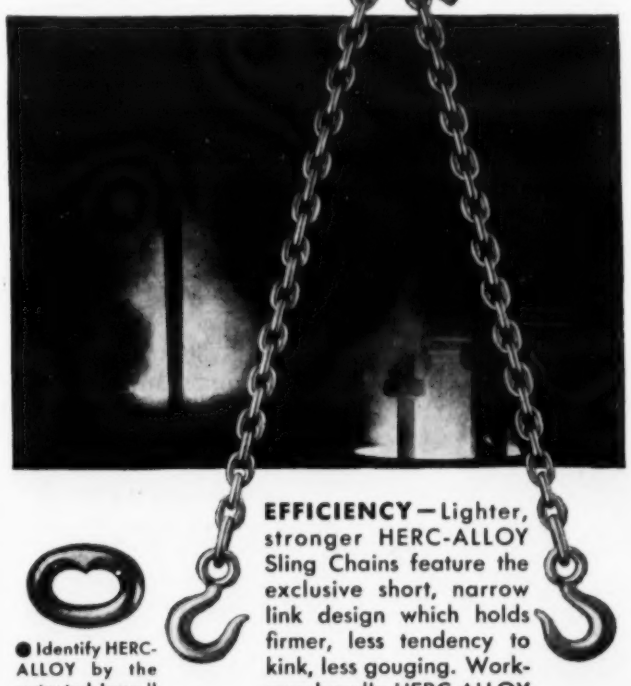
NONE BETTER...
America's First and Safest

HERC-ALLOY SLING CHAINS

STRENGTH—Size for size, no other sling chain offers a greater tensile strength. HERC-ALLOY will not crystallize—never requires annealing.

SAFETY—HERC-ALLOY Sling Chains are made to your specifications. Every new sling carries a written guarantee, is registered and tested before shipping. This registration serial number is carried at the top link.

● Serial number permanently affixed near top link for positive identification.



● Identify HERC-ALLOY by the patented Inswell side weld with the extra swell of metal on the inside of the link.

EFFICIENCY—Lighter, stronger HERC-ALLOY Sling Chains feature the exclusive short, narrow link design which holds firmer, less tendency to kink, less gouging. Workmen handle HERC-ALLOY with less effort.

PREFERENCE—Men who buy and use sling chains are influenced only by facts learned through experience. HERC-ALLOY Sling Chain preference has been built up over the years, not just by what we say, but by how HERC-ALLOY performs on the job.

Write for Data Book No. 3 which contains much useful manufacturing and application information on HERC-ALLOY Sling Chains.

COLUMBUS McKINNON CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corp.)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
District Offices: New York • Chicago • Cleveland
Other Factories at Angola, N. Y., Dixon, Ill., St. Catharines, Ont., Can., and Johannesburg, South Africa.

▲ For more details circle NED-4102 on enclosed inquiry slip ▲

Dependable DUMPERS

Speed Production . . . Cut Costs

Leading manufacturers have increased their production while actually cutting costs with DEPENDABLE DUMPERS . . . standard ⅓ and 1 cubic yard capacity hopper dumpers are available in steel from #11 ga. to ¼" plate . . . designed to fit any fork or platform lift truck . . . you can depend on DEPENDABLE for the finest in materials handling equipment.

Equipped with casters dumpers can be transported and dumped by one man as well as by truck . . . operates by gravity . . . dumps . . . returns . . . locks in seconds.

Dumpers can be arranged for stacking where floor or storage space is at a premium . . . also special dumpers designed to fit unusual applications.

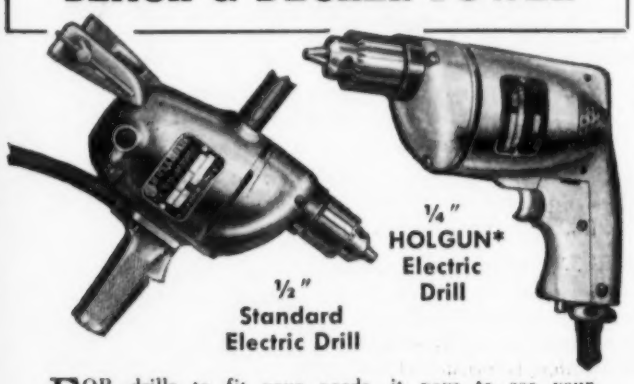
Write for literature and prices

STREATOR SINCE 1913 Dependable MANUFACTURING CO. STREATOR • ILLINOIS

▲ For more details circle NED-4103 on enclosed inquiry slip ▲

DRILLING PROBLEM?

Switch to BLACK & DECKER POWER



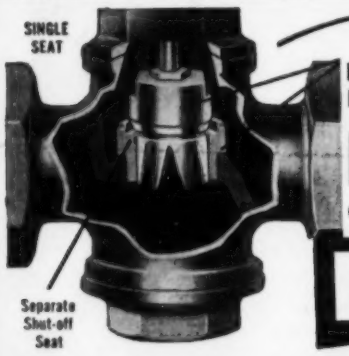
FOR drills to fit your needs, it pays to see your nearby Black & Decker Distributor *first*! You get an unmatched choice of Drill models—capacities from ¼" to 1¼"—choice of handle arrangement—choice of speed, power and price in most capacities. And you get powerful Black & Decker-built motors, full ball-bearing construction, extra-tough parts, husky housings, perfect balance. Write for free catalog to: THE BLACK & DECKER MFG. Co., 662 Pennsylvania Ave., Towson 4, Md.

*Trade Mark Reg. U.S. Pat. Off.

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC TOOLS

▲ For more details circle NED-4104 on enclosed inquiry slip ▲



Easily Renewable Plug and Seat

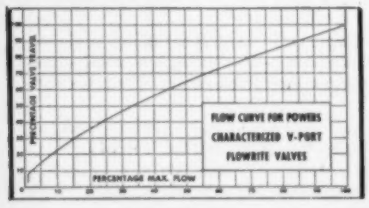
POWERS CHARACTERIZED V-PORT FLOWRITE VALVE

Gives Better Control with Less Maintenance

SPECIAL FLOW CHARACTERISTICS—High lift V-Port plug provides proportional flow throughout entire lift of stem as shown in chart below.

WIDE VARIETY OF SIZES—½" valve available with plugs to give 15%, 30%, 60% or 100% of maximum capacity. Easily interchangeable without removing valve from line.

SUPERIOR DESIGN of stainless steel plug and seat reduces wire drawing, insures longer life and tight shut-off. V-Ports do the throttling, protecting separate shut-off seat. Write for circular (a70).



THE POWERS REGULATOR CO., Skokie, Ill.

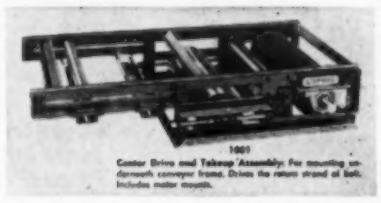
▲ For more details circle NED-4105 on enclosed inquiry slip ▲

DEHUMIDIFIER controls humidity in 8000 cu ft area

Up to 12 qt of moisture can be removed from closed areas of up to 8000 cu ft air space in 24 hours by the model ACD-28 room dehumidifier. Unit is operated by a 110-v ⅛-hp motor-driven hermetically sealed, permanently lubricated compressor. The electrically operated unit measures 13½ x 15 x 22⅝ in. and plugs into any electric outlet. Available from **Radio Corp. of America,** RCA Victor Div., Front & Cooper Sts., Camden 2, N. J.

▲ For more details circle NED-4106 on enclosed inquiry slip ▲

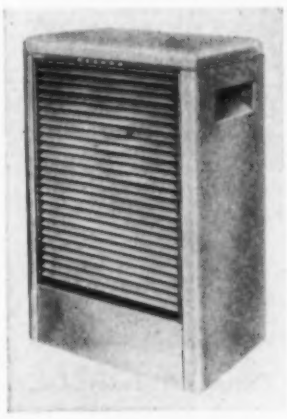
CONVEYOR UNITS stocked for custom applications



Standardization of drives, take-ups, end roller assemblies, intermediate frames, bearings, rollers and supports for Handidrive 1000 series conveyors makes it possible to build a custom layout with stocked components. Of heavier design than the Handidrive 400 unit introduced some time ago, this series has 1000-lb belt pull. It will handle 15,000-lb total load on belt conveyor 150 ft long. Precision bearings are used at all drive and take-up shafts. Photograph shows center drive and takeup assembly unit for mounting underneath conveyor frame. It drives return belt and is one of five parts in the Handidrive system. Made by **Standard Conveyor Co.,** Dept. HD, 831 E. Seventh St., North St. Paul 9, Minn.

▲ For more details circle NED-4107 on enclosed inquiry slip ▲

GAS ROOM HEATER improved model has thermostat



Completely redesigned series FM gas-fired room heater includes thermostatic control as standard equipment and reduced height for better appearance. Unit is completely automatic, vented, warm air circulating type available in 25,000, 50,000 and 75,000 Btu capacities and can use natural, manufactured, mixed or LP gases. Front panel louvers are adjustable to direct warm air as desired. Made by **Reznor Mfg. Co.,** 168 James St., Mercer, Pa.

▲ For more details circle NED-4108 on enclosed inquiry slip ▲

Shredded Paper

IS THE IDEAL PACKING MATERIAL

produce it yourself for . . .

(1) Real dollar & cents savings
(2) Minimum inventories
(3) Substantial space savings
(4) Dependable supply

Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing *today* to:

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

▲ For more details circle NED-4109 on enclosed inquiry slip ▲

Let Farval do your lubricating and step up machine production

THROUGH efficient, dependable lubrication of machines and industrial equipment of all kinds, Farval saves 4 ways: It saves oiling labor, it saves lubricant, it reduces bearing expense, and most important of all, it eliminates down time, thereby increasing machine production.

The Farval System is a positive mechanical method of delivering oil or grease under pressure to a group of bearings from one central station, in exact quantities, as often as desired. It consists of a central pumping unit, automatic or manually operated, two main supply lines and a measuring valve for each bearing.

"Case Studies 1952" and Bulletin 25 give you the facts and figures. Write to The Farval Corporation, 3283 East 80th Street, Cleveland 4, Ohio.

Write for these FREE bulletins

FARVAL CENTRALIZED SYSTEMS OF LUBRICATION

▲ For more details circle NED-4110 on enclosed inquiry slip ▲

Use Resistance Welding To Save Materials

Ohio WW Nut For Watertight Projection Welding.

Material: Low carbon steel

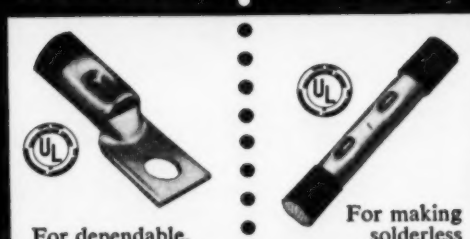
Samples and information about Ohio Nuts for resistance welding available to accredited concerns

The Ohio Nut and Bolt Co.
608 Front St., Berea, Ohio

▲ For more details circle NED-4111 on enclosed inquiry slip ▲

ONE PIECE TUBULAR DESIGN UP TO 2,000,000 CM

HYLUGS : HYLINKS



For dependable, rapid termination of wire and cable. Easily installed with matched Burndy tooling.

For making solderless end-to-end connections. Installed rapidly with Burndy indenting tools.

Ask your Burndy Distributor

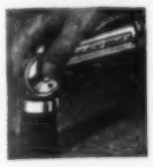
BURNDY

NORWALK · CONNECTICUT

▲ For more details circle NED-4112 on enclosed inquiry slip ▲

NOT WHEN YOU USE IDEAL Stencil Marking Equipment

IDEAL STENCIL CUTTING MACHINE. Automatic Carriage Return and Word Spacer for fast, accurate stencils . . . visible cutting—see what you're doing . . . Minimum Margin Grip—saves up to 25% on stencil board. Made in three lettersizes.



"HANDY A" ANGLE BRUSH

Natural-grip handle . . . Push-button ink feed . . . one-piece, can't-leak Aluminum body.

IDEAL STENCIL INK

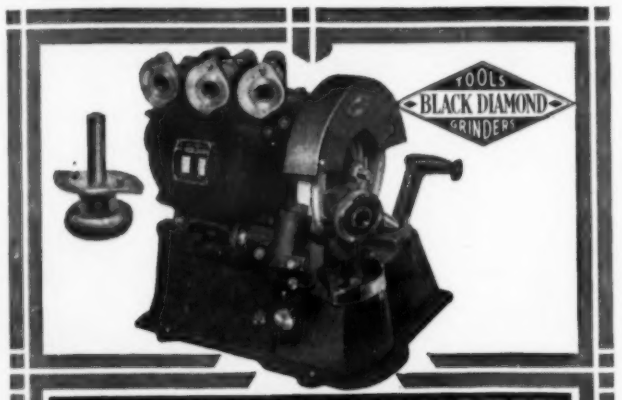
Complete line of black and colored fountain brush and metal marking inks. Free-flowing, quick-drying.

IDEAL STENCIL MACHINE CO.

FREE! "IDEAL SHIPPING GUIDE." Valuable shipping dept. tips.

134 Iowa Ave., Belleville, Ill.

▲ For more details circle NED-4113 on enclosed inquiry slip ▲



BLACK DIAMOND

PRECISION DRILL GRINDER

• FOR SHARPENING ALL SMALL DRILLS • REDUCES DRILLING COSTS, DRILL BREAKAGE AND WORK REJECTS; CONSERVES SKILLED LABOR FOR MORE IMPORTANT DEFENSE WORK

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are tremendously reduced.

Anyone can operate a Black Diamond, can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length, correct angle and clearance for fast, precision drilling.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, always ready for use. You should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

▲ For more details circle NED-4114 on enclosed inquiry slip ▲

PAGE FENCE *-Since 1883*

• AMERICA'S FIRST WIRE FENCE •

Sabotage is a danger which calls for vigilance day and night. Property line vigilance is the job for Page Chain Link Fence, now as it has been for more than 60 years. Consult the nearby, long-experienced Page Fence engineering and erecting firm, which will submit cost estimates without obligation. Name and address will be sent with illustrated fence data on request.

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

▲ For more details circle NED-4115 on enclosed inquiry slip ▲

BIN-LEVEL CONTROL SWITCHES designed for hazardous dust areas

Designed for operation in hazardous areas involving explosive vapors and dusts, Tellevel automatic bin-level control switch, right, can be hung from pipe conduit or bolted to bin walls with attached mounting brackets. Unit is Underwriters' Laboratories approved for operation in ethyl ether, gasoline, alcohol, acetone, coal, grain and flour dust atmospheres. Rising or falling level of material deflects pendant float to actuate Micro switch. Where coal, stone and ore with ¾-in. lump sizes are being discharged into bins, heavy duty switch, left, is most practical. This unit has steel housing protecting switch mechanism and steel cone instead of standard plastic float ball. Rubber cup at base of housing forms dust and moistureproof seal. Each control switch is shipped with color coded pig tail connections for easy wiring. Made by **Stephens-Adamson Mfg. Co.,** 12 Ridgeway Ave., Aurora, Ill.

▲ For more details circle NED-4116 on enclosed inquiry slip ▲

PALLET RACK designed to fit user's pallets

Ease of adjustment is feature of this pallet rack which is tailor-made and designed to actual dimensional specifications of user's pallets. Rack has maximum dimensions of 60 x 60 x 120 in. and can be furnished with extra heavy tubular supports or solid shelves. Heavy-gage upright members are notched on 6-in. centers from 14 to 92 in. It takes only ½-minute for one man to move a shelf up or down without tools. Load limit is up to 3000 lb per shelf. Unit can be furnished in single face, double face, single entry or double entry groups. Units are shipped knocked down. Weld nuts and interchangeable parts afford easy erection in field. Made by **Republic Steel Corp.,** Berger Mfg. Div., 1038 Belden Ave. N.E., Canton 5, O.

▲ For more details circle NED-4117 on enclosed inquiry slip ▲

DO YOU KNOW? There is a growing desire among business and working people for knowledge of stocks and bonds. How several large companies are telling their employees the where's and whyfor's of capitalism, the American economic system, what makes a corporation tick and what stocks and bonds are all about is related in 16-page illustrated brochure "They're doing it—Are You?" Articles are reprinted from industrial company house publications. Copies are yours for the asking. Write to Merrill Lynch, Pierce, Fenner & Beane, 70 Pine St., New York 5, N. Y.

▲ For more details circle NED-4118 on enclosed inquiry slip ▲

YOUR PRODUCT CAN BE STILL BETTER ...WITH A HACKNEY DEEP DRAWN *SHAPE*

This typical example of Hackney Deep Drawing is a liquid Freon receiver, 8" i.d. x 24" overall length. Note the two "bull's-eyes" covered with thick glass. Amount of liquid in receiver is easily ascertained from the exterior.

A deep drawn shape instead of a casting! Seamless construction instead of a welded part! These are ways Hackney parts can better your product. And you can expect such advantages as: decreased overall weight, greater strength, faster production, elimination of expensive machining operations, greater durability, improved appearance and lower costs.

Remember, Pressed Steel Tank Company specializes in cold drawing with almost 50 years' experience and a large assortment of tools offering customers unique advantages.

Write for full details

Hackney **Pressed Steel Tank Company**

Manufacturers of Hackney Products

1450 S. 66th St., Milwaukee 14 • 1324 Vanderbilt Concourse Bldg., New York 17
255 Hanna Bldg., Cleveland 15 • 936 W. Peachtree St., N.W., Room 136, Atlanta 3
208 S. LaSalle St., Room 779, Chicago 4 • 578 Roosevelt Bldg., Los Angeles 17

CONTAINERS FOR GASSES, LIQUIDS AND SOLIDS

▲ For more details circle NED-4119 on enclosed inquiry slip ▲

SPEED COUNTER AND STOP WATCH *in One Instrument*

JAGABI® TACHOSCOPE

Eliminates "Human Element" of Error

Measurement of Speed and Time are combined in the Tachoscope in such a way that the usual error in starting and stopping is eliminated. Higher accuracy of calculation is assured because of the longer time the Tachoscope can be operated. It is a high precisioned instrument for machine speeds up to 20,000 rpm. In fact, many use it as a standard for checking other speed measuring instruments. The high-grade stop watch can be used independently.

SPEED MEASURING BULLETIN. A selection chart of Speed Measuring Instruments for specific conditions is a feature of Bulletin 35-D. Mailed on request.

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle NED-4120 on enclosed inquiry slip ▲

Cut costs with faster CASE HARDENING

More economical ... is the fastest method of producing a specified case depth—for example, a case of 0.040 in. can readily be produced in 2 hours ... no boxes or retorts to pack and unpack or to heat as dead loads.

Less distortion ... temperature uniformity throughout bath guaranteed within 5° F.... less subsequent grinding ... permits more shallow case depths.

Closer control of depth and other properties of the case.

Eliminates usual reheating operation ... work quenched directly from carburizing bath.

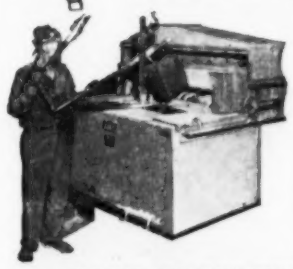
Extreme flexibility ... several batches may be case hardened simultaneously—each to a different case depth.

No "oxygenation" of the case, with attendant pitting and spalling, as frequently occurs in gas or pack carburizing.

Low maintenance costs ... plain steel pots have a life of 1 to 3 years.

Combines with Martempering ... for best control of distortion ... by an isothermal salt bath quench directly after carburizing.

Brazing can be performed simultaneously ... both carburizing and brazing done with one heating of the work. Brazing cost—nothing.



390 LBS. OF WORK AN HOUR ... from an Ajax furnace no larger than your desk!

180 lbs. of metal body screws per charge are given case depths ranging from 0.004" to 0.010" as required.

AJAX ELECTRIC•COMPANY, Inc.,

103 Allen Street
Philadelphia 23, Pa.
World's largest manufacturer of electric heat treating furnaces exclusively

SELF-MELTING • SELF-CIRCULATING
AJAX HULTGREN

ELECTRIC SALT BATH FURNACES

▲ For more details circle NED-4121 on enclosed inquiry slip ▲

BLUE 'M' LINE

VERSATILE - DEPENDABLE OV-18 OVEN

5130 CUBIC INCHES OF WORKING SPACE • INTERIOR OF STAINLESS STEEL

THIS DE-LUXE OVEN IS THE RESULT OF SUPERB ENGINEERING, THE FINEST OF WORKMANSHIP AND MATERIALS . . . GUARANTEED FOR ONE YEAR.

FEATURING: Automatic Control (response sensitivity ± 1° F) plus 3 heat switch for low, medium, and high temperature, prevents troublesome "overshooting" and "undershooting."

Attractive baked-on grey wrinkle finish enamel. Heavy gauge oven steel exterior. Two shelves — adjustable and removable. Guaranteed MODELLA. elements.

Inside dimensions: 19"W x 15"H x 18"D

Temperature range: 100° F to 550° F

Current consumption: high setting 1750 W med. setting 875 W low setting 440 W

Price **$175.00**

115 V, 60 C A. C.

*Other sizes available

CONTACT YOUR LOCAL DEALER or

BLUE M ELECTRIC CO.
306-8 W. 69th ST. CHICAGO 21, ILL.

For more details circle **NED-4122** on enclosed inquiry slip

Buckingham *Thread* Restorer

Now — no more drilling or hack sawing to replace damaged male threads! Buckingham Thread Restorer eliminates flats and nicks — cleans heavily rusted and corroded threads on studs, bolts, pipes, threaded shafts.

Simple — quick. Just slip on a Buckingham Thread Restorer at bottom of damaged area and back-off. Jaws adjust to any pitch — SAE, ASME, pipe or tapered. One tool handles many sizes . . . no die sets needed!

Eight models for ¼" to 6" threads. Write for free folder and name of nearest dealer.

BUCKINGHAM MANUFACTURING CO., INC.
65-67 Travis Street Binghamton, N. Y.

For more details circle **NED-4123** on enclosed inquiry slip

New **THERMALINK**

Automatic Electric

OIL PRE-HEATING UNITS

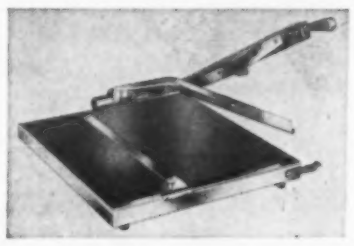
- ★ Integral adjustable thermostat eliminates wiring problems.
- ★ Adjustable temperature dial marked in degrees.
- ★ Available with both thermostat and motor control built into unit.
- ★ No relays or auxiliary controls needed.
- ★ Available with pipe-thread or flange header.
- ★ Wattages from 1000 through 7500.
- ★ Conservative watt-densities prolong life, minimize carbonization.

WRITE DEPT. N FOR DATA SHEETS PRS-152 & FRS-152

ELECTRO-THERM INC. • SILVER SPRING, MD.

For more details circle **NED-4124** on enclosed inquiry slip

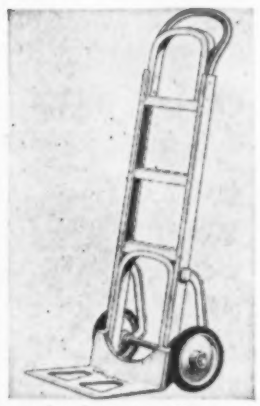
LIGHT MATERIAL CUTTER for paper, rubber, plastics, fabric



Materials such as paper, rubber, plastics and fabrics to be cut by the Jacques, Jr. cutter are held securely in place by clamp device which automatically comes down as blade is lowered. Formerly called the Alfa cutter, it makes clean, accurate cuts. A spring tension device exerts even pressure against entire area of knife blade as it cuts through material and meets a guide. Safety spring on blade handle prevents accidental dropping of the blade. Cutting to specification is facilitated by an adjustable sliding gage. Table model cutter is made in 12, 16, 20, 24 and 30-in. sizes. Made by **Hobbs Mfg. Co.**, Dept. N75, 26 Salisbury St., Worcester 5, Mass.

For more details circle **NED-4125** on enclosed inquiry slip

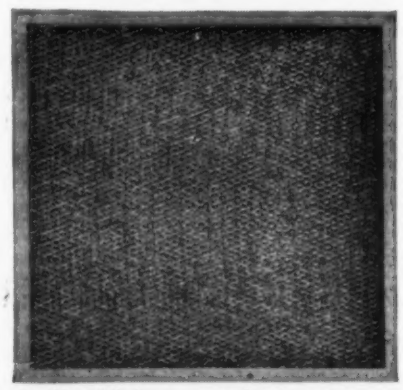
MAGNESIUM HAND TRUCK has removable stair climbers



Weighing only 16 lb, model 12-A-800-SC magnesium hand truck has load capacity of 450 lb. It is equipped with removable stair climbers which can be easily replaced. Use of mechanically joined standard parts and assemblies provides for inexpensive parts replacement and repairs. Engineered weight distribution makes for ease of operation under full load as well as proper balance. Made by **Magline, Inc.**, P. O. Box 346, Pinconning, Mich.

For more details circle **NED-4126** on enclosed inquiry slip

GREASE FILTER removes oil from exhaust duct air



Designed to remove entrained oil from air entering exhaust ducts, Airsan grease filter prevents fire hazards and prolongs the life of fan motors and other mechanical equipment. Filter features large grease holding capacity, low initial resistance and permanency, and is built with bronze welded corners, galvanized frames, electroplated woven wire cloth media and expanded metal face plates. It is available in unit assemblies for wall or ceiling types, in single or multiple units. Assemblies include holding frames, supporting angles, end seals, spring clips and fireproof felt seals. Made by **Air Filter Corp.**, Erie & N. Water Sts., Milwaukee 2, Wis.

For more details circle **NED-4127** on enclosed inquiry slip

GOV'T SPEC specialist relies on Polyken

Sealing and packaging products to government specifications is fast, safe and economical with Polyken Industrial Tapes—made by the company that makes 30 tapes meeting Government Specification JAN-P-127-Amend 3. Photo shows how A. G. Barkow Co., Milwaukee, Government Specification Specialist, uses Polyken Tape No. 214 to seal all openings on Army mobile shower unit for overseas shipment.

Write Polyken, Dept. NEE, 222 West Adams St., Chicago 6, Ill., for free booklet and samples of No. 214.

THE NEW **Polyken®** INDUSTRIAL TAPES

TAILORED TO YOUR JOB

Polyken Industrial Tape, Department of Bauer & Black, Division of The Kendall Company

For more details circle **NED-4128** on enclosed inquiry slip

A positive seal

for OIL • GAS
FREON • BUTANE
STEAM • WATER

Pipetite provides a positive seal for joints regardless of the type of fluid or gas being used. It is the dependable joint compound that makes good workmanship and assures user satisfaction. To be absolutely sure of "no leaks" use Pipetite. If your supplier does not have it . . . write direct.

LACO BRAND

LAKE CHEMICAL CO.
3050 W. Carroll, Chicago 12, Ill.

For more details circle **NED-4129** on enclosed inquiry slip

In Atmospheres Containing Dust, Mist, Dirt, Fog . . . Protect the Power that Drives Your Production Machines

Use *Century*

Century 15 horsepower TEFC motor operates in coolant fog from this grinder.

Totally Enclosed Fan Cooled Motors

Where the air is charged with substantial quantities of metallic or abrasive dusts, coolant mists or fog, or oil-laden factory dusts, Century Type TEFC Motors help maintain uninterrupted production.

Vital parts of the Motor are isolated from the outside atmosphere. A large fan keeps the motor temperature well within safe limits.

Wherever there are adverse atmospheric conditions, specify Century Totally Enclosed Fan Cooled motors.

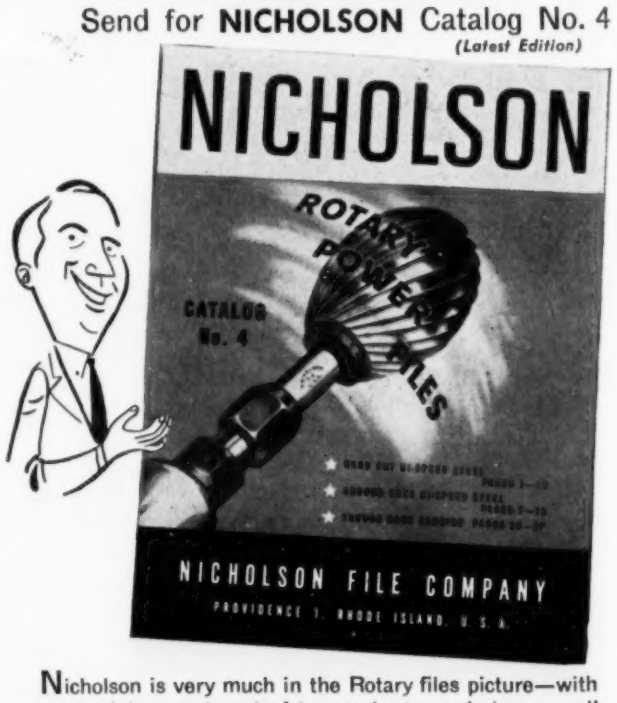
Many types and kinds of Century motors are built in sizes from 1/8 to 400 horsepower.

Century C MOTORS

CENTURY ELECTRIC COMPANY
1806 Pine Street, St Louis 3, Missouri
Offices and Stock Points in Principal Cities 703R

For more details circle **NED-4130** on enclosed inquiry slip

Know the **NICHOLSON** Rotary line
Send for **NICHOLSON** Catalog No. 4
(Latest Edition)



Nicholson is very much in the Rotary files picture—with a complete assortment of types, shapes and sizes . . . all designed and manufactured in the Nicholson tradition for

LONG-LASTING QUALITY
TRUE-CENTER ACCURACY
FAST-CUTTING SPEED

SOLD THROUGH INDUSTRIAL DISTRIBUTORS

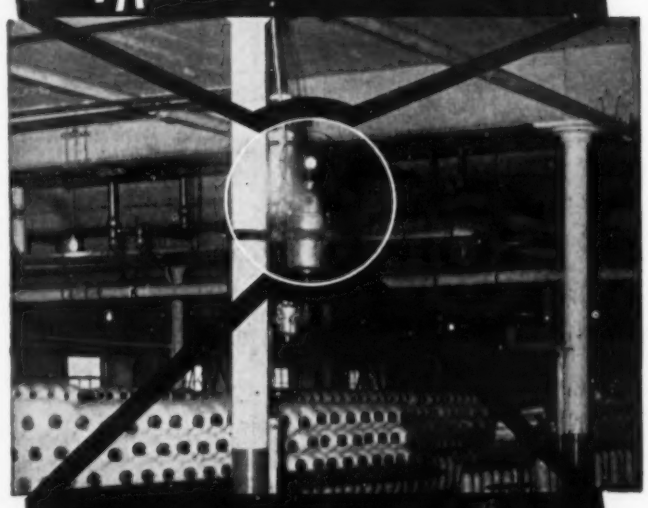
For more details circle **NED-4131** on enclosed inquiry slip

SPRACO NOZZLES

Write for NOZZLE CATALOG to
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-4132 on enclosed inquiry slip

Question: What about Unit Type Steam Humidifiers?



Answer: Armstrong Unit Type Steam Humidifiers are ideal for overcoming wintertime dry air conditions for the following reasons:

- **Fully Automatic.**
- **Accurate Control**—within 1%—2% relative humidity
- **Clean**—no residue in the air
- **Quiet**—acoustically designed
- **No cooling effect**—raise room temperature a degree or two
- **Economical to operate**—pennies per day per unit—½ to ¼ the price of water spray equipment
- **Low in first cost** —approximately $182 complete for a unit to handle up to 40,000 cu. ft.
- **Easy to install anywhere**—hooked up to existing steam and electrical systems much like unit heaters
- **Dependable**—quality materials and workmanship
- **Guaranteed**—complete satisfaction or your money back. Write today.

ARMSTRONG MACHINE WORKS
819 Maple Street, Three Rivers, Mich.

For Full Details — Send for BULLETIN 1773

Operating principles, capacities, sizes, prices, hookups, selection data and other useful information — all included in Bulletin 1773. Send for your copy today.

ARMSTRONG Steam HUMIDIFIERS
BUILT BY THE MAKERS OF ARMSTRONG STEAM TRAPS

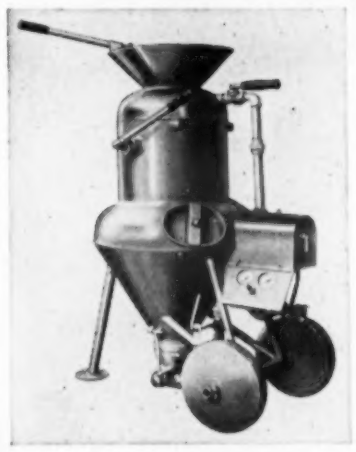
For more details circle NED-4133 on enclosed inquiry slip

PLASTIC COATED WIRE BASKET
detergentproof coating will not peel

Practical for light materials handling of small metal or plastic parts either by hand or conveyor, this plastic coated wire basket has joints welded to prevent twisting or warping and minimize "give" under load. Entire basket except for electro-zinc-chrome plated rustproof handle is double coated with detergentproof yellow bonded plastic which will not peel. Open foot construction provides maximum circulation of air for drying parts, and allows basket to rest firmly on uneven surfaces. Handle design eases weight of full loads for hand carrying. It rests precisely on rim and does not overhang or fall into basket. Measuring 10-in. high, 14 in. across top and 9-in. across base, baskets nest snugly for storage or shipping. Made by **Crown Poultry Equipment Co.**, 27 Emanuel Ave., New Brunswick, N. J.

For more details circle NED-4134 on enclosed inquiry slip

CEMENT PLACEMENT MACHINE
also handles other bulk materials



Cement, sand, lightweight aggregates, refractories, light gravels and other sandy, granular or powdery materials can be handled by the Blastcrete air placement machine. Made in small, medium and large models, machine can also be used for sand blasting. Operator has complete control of air pressure and material volume, and all adjustments can be made while machine is in operation. Design of agitating and material metering mechanisms requires small amount of air, thus permitting use of small air compressors. Advantage of material placed with the machine is the density and strength of the finished product. Gunned concrete requires no forms in most cases and can be placed on floors, walls and ceilings in a variety of textures. Made by **Blastcrete Equipment Co.**, 11154 Santa Monica Blvd., Los Angeles 25, Calif.

For more details circle NED-4135 on enclosed inquiry slip

DO YOU KNOW? Weak spots caused by heat corrosion in aircraft exhaust systems can be detected readily with an electronic device known as the Magne-Probe. This tester is equally useful for checking the soundness of welds and can be used on relatively inaccessible places. Developed by American Instrument Co., 8010 Georgia Ave., Silver Spring, Md.

For more details circle NED-4136 on enclosed inquiry slip

STOP DOWN TIME ON AIR-OPERATED EQUIPMENT With the HANNIFIN "AIR WARDEN"

High production schedules *DEMAND* continuous performance from air-operated equipment. So Hannifin developed the "Air Warden" as the finest protection possible.

One complete "Air Warden" unit FILTERS AIR — REGULATES PRESSURE — LUBRICATES —*Simultaneously!*

GET ALL THE DETAILS ON HANNIFIN'S MONEY-SAVING "AIR WARDEN"!
Components sold singly or in any combination. Write for literature.

HANNIFIN

Hannifin Corporation, 1127 S. Kilbourn Ave., Chicago 24, Illinois

For more details circle NED-4137 on enclosed inquiry slip

RUBBER BONDED TO METAL

NEW PROCESS BONDS RUBBER TO METAL OR CERAMICS

Rubber-bonded-to-metal fabrications now can be furnished for application in electrical switches, control valves, processing equipment, conveyors, controllers, heat-treating equipment and a wide range of other components.

Intricate or simplified parts can be fabricated with almost any metal or ceramic cross-section utilizing natural or synthetic rubber stocks.

Rubber-Metal parts can be furnished which will remain stable upon exposure to temperatures ranging from -75 to 200 degrees F. or to resist chemicals, oils and gases and effects of prolonged weathering.

Write today and tell us your problem!

657-AA

ANDREWS-ALDERFER COMPANY
1102 HOME AVE. AKRON 10 OHIO

For more details circle NED-4138 on enclosed inquiry slip

ORDER JOHNSON UNIVERSAL BRONZE by Bearing Size

SAVE machine time and money. Johnson Bronze Bars are completely machined—I. D., O. D. and ends . . . with 1/64" cut to bring to bearing size. No waste, no defects. Over 350 sizes, inside diameters ½" to 7¾", and outside diameters 1" to 10" in cored bars. Solid bars ⅝" to 8" diameters. All 13" lengths. Available from Johnson distributors and warehouses.

JOHNSON BRONZE CO.
580 S. Mill St., New Castle, Pa.

Write for New Catalog

JOHNSON B BEARINGS Sleeve-Type

For more details circle NED-4139 on enclosed inquiry slip

Now LEWIS-SHEPARD Offers You ELECTRIC FORK TRUCK Operation at ½ the usual cost!

WE TOOK the need for a light weight compact, rugged electric fork truck and built the "J" around it . . . Repeat orders prove the "J" fills that need to a "T".

SPACEMASTER® J MODEL from $2765 1000 1500 & 2000 LBS. CAPS. Battery and Charger Included

"J" is the Truck for you if you are cramped for space . . . have limited floor load capacity . . . need light weight fork truck operation . . . *and you get L-S Heavy Fork Truck Quality, too!*

SALES-SERVICE in PRINCIPAL CITIES
See Your Yellow Phone Book
Branch Plant Crawfordsville, Indiana

LEWIS-SHEPARD PRODUCTS, INC.
DEPT. J-32 Watertown 72, Mass.
Please send me complete information about your SPACEMASTER "J" MODEL Electric Fork Truck.
Name ____
Firm ____
Street ____
City ____ State ____
SEND FOR COMPLETE INFORMATION

FORK TRUCKS • ELECTRIC PLATFORM AND PALLET TRUCKS
JACKSTACKERS • TOTEMASTERS • HANDY HOISTERS • STACKERS AND PORTABLE CRANES
HYDRAULIC AND MECHANICAL LIFT TRUCKS • FLOOR TRUCKS • STEELERS • SKIDS • STORAGE RACKS

THE MOST COMPLETE LINE IS THE "MASTER" LINE

For more details circle NED-4140 on enclosed inquiry slip

SENSITIVE TO A "TOUCH"

STABLE

DRIFT-FREE

CONO AIR PRESSURE REGULATOR

The Cono Precision Regulator is ideal for "dead-end," or small volume flowing service. Responsive to setting changes as small as *five thousandths psi.* Holds set pressure regardless of vibration or normal upstream pressure variations. Streamlined design, all brass and stainless steel. Styles for flush panel or line mounting. Available in ¼" pipe size, in a variety of spring ranges from 0-5 to 0-125 psi.

BULLETIN PH-10.

CONOFLOW CORPORATION
2100 ARCH ST.
PHILADELPHIA 3, PA.

Cono-Controls

CE-115

For more details circle NED-4141 on enclosed inquiry slip

INDUSTRIAL TRUCKS

. . . how to tell when they are

Busy?
Idle?
Lifting?
Engine Running?

PUT ON

Servis Recorders

A couple of screws or bolts does the job. Then the truck itself *writes its own story!*

THE CHART

Wax covered, no ink or pencil needed; a sapphire stylus marks the record—a picture of the day's work at a glance.

SERVIS RECORDER—closed. Just bolted on—no connection with any moving part.

Write for Bulletin IT

THE SERVICE RECORDER COMPANY
1375 Euclid Avenue • Cleveland 15, Ohio

For more details circle NED-4142 on enclosed inquiry slip

Now Spray On design layout ink

"JUST PRESS THE BUTTON ON THE CAN"

Faster! Easier!

No brush, no waste, no mess! Self-pressurized can sprays on CROWN Design Layout Ink in fine mist that dries to hard surface in a minute. Dark blue is standard—other colors on volume purchases.

ORDER TODAY!
$1.59 PER 12-OZ. CAN
15% discount in cases of 12
Additional discount for larger quantities
FOB Sycamore, Illinois

CROWN INDUSTRIAL PRODUCTS CO.
406 Borden Ave., Sycamore, Illinois

Please ship at once
_____(how many?) cans
_____(how many?) cases
CROWN Design Layout Ink

Name_____
Company_____
Our Purchase Order No._____
Address_____
City_____ Zone____ State_____

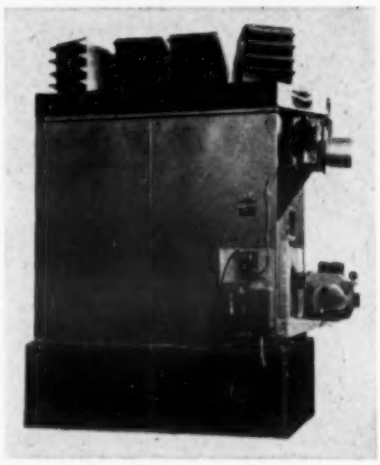
For more details circle NED-4143 on enclosed inquiry slip

INTERCOMMUNICATION SPEAKER
can also serve as a microphone

Adaptable as a re-entrant speaker in low-powered voice paging systems or as a high efficiency microphone in talk-back systems, this MI-6441 speaker is completely weatherproof. Use can be in freight terminals and warehouses, loading platforms, factories and other industrial locations. Its removable diaphragm unit is enclosed in a weatherproof spun aluminum cover, attached to a cast aluminum base. A wing nut locks it in the desired position. Speaker has a distribution angle of 120 degrees, high power handling rating and good intelligibility. Power handling rating is 12 w, sensitivity is 105 db, frequency response is 350 to 10,000 cps and impedance is 16 ohm. Made by **Radio Corp. of America,** RCA Victor Div., Front & Cooper Sts., Camden 2, N. J.

For more details circle NED-4144 on enclosed inquiry slip

INDUSTRIAL SPACE HEATER
can produce 2 million Btu per hour



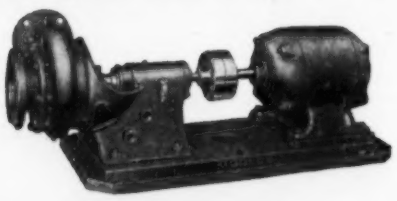
Plant areas from 16,000 to 24,000 sq ft can be heated by model 2000 Thermobloc industrial space heater capable of producing 2 million Btu per hour output. Twin heat exchangers arranged in form of V afford maximum scrubbing of heating surface by air passing through. Outlet diffusers rotate 360 degrees to throw the heat wherever desired. Ducts can be run from outlets to adjoining rooms. Heater may also be used as central heating plant, in which case, plenum chamber is supplied instead of four diffusers. Normal air output is 22,000 cu ft per minute, and air intake velocity is 440 cu ft per minute. Fan is powered by 10-hp motor. Unit can be adapted to burn light fuel oil, heavy oil or gas and can be equipped with combination burner for instantaneous conversion from gas to oil or oil to gas. Made by **Prat-Daniel Corp.,** Thermobloc Div., 11-A Meadow St., South Norwalk, Conn.

For more details circle NED-4145 on enclosed inquiry slip

DO YOU KNOW? Members of the Hartford, Conn. Gun Club recently reaped a profitable "windfall" and, at the same time, contributed to the scrap salvage program. They "mined" out the range for lead pellets—sold the lead for $35,000 and netted a profit of about $17,500. Thar's gold in them thar scrap drives.

For more details circle NED-4146 on enclosed inquiry slip

A versatile performer . . .



GOULDS "Support-Head" Centrifugal Pump

Here's a pump that's ready to go to work, handling any one of a dozen jobs. For example, you can use it for general industrial pumping, booster service, water supply systems, liquid circulation, and air conditioning service.

Its extra heavy, well proportioned construction minimizes pump maintenance. Full open-top design provides ready access to gland and stuffing box . . . a particularly important feature in inaccessible locations. Goulds Fig. 3750 ball bearing support-head centrifugal pumps are available with direct or belt drive. Capacities up to 3800 G.P.M. Heads up to 400 ft. Write for Bulletin 715.1.

Goulds PUMPS INC.
Seneca Falls New York

For more details circle NED-4147 on enclosed inquiry slip

It will pay you to consider

"SUPER-SOAK" PARTS WASHER

for the removal of foreign substances from metal or other parts; and for many "jobs" around the shop.

PATS. PENDING

- SIMPLE
- PRACTICAL
- NO PUMPS, SPRAYS OR HANDWORK
- VARIOUS SIZES
- *Please write for details.*

THE SUPER-SOAK COMPANY, INC.
3770 S. PENNSYLVANIA AVE., MILWAUKEE 7, WIS.

For more details circle NED-4148 on enclosed inquiry slip

FOR GREATER CONTROL OVER WELD POWER...

Robotron "CUSHIONED POWER" WELDING TIMERS

HELPS MANUFACTURERS MEET EXACTING SPECIFICATIONS IN WELDING OF ALUMINUM, STAINLESS and NICKEL ALLOY STEELS, COATED OR PLATED METALS, OR ANY COMBINATION OF DISSIMILAR METALS – Regardless of Conductivity!

This new concept of Vernier Control, preheats and prepares the welding material, welds and tempers according to specific needs.

- Reduces metal Spewing, Cracking and Surface Indentation.
- Reduces Weld Power KVA (heat) demand.
- Reduces usual required Electrode Pressures.
- Reduces Electrode Pickup and Cleaning Time.
- Reduces Welding Costs—Increases Production.
- Assures maximum Ductility and Constant Uniformity.
- Can be Added to YOUR PRESENT EQUIPMENT with Ease.
- Can be used in Single Phase Welding.

Factory time-tested and proven like all other Robotron Electronic Control Equipment, this new "Cushioned Power" Welding Timer features Compactness, Maximum Accessibility, Easy Installation, Easy Maintenance and Finger-Tip Modulated Power Control.

HI-CONDUCTIVITY
LO-CONDUCTIVITY

THE FINEST IN INDUSTRIAL ELECTRONICS

FREE
ASK FOR New ROBOTRON "Cushioned Power" WELDING TIMER CATALOG TODAY!

Robotron CORP.
21310 W. Eight Mile Rd., Detroit 19, Mich.

T. M. Registered

For more details circle NED-4149 on enclosed inquiry slip

Thor ANNOUNCES A NEW AIR IMPACT WRENCH

With Exclusive Rolling Ball Type Cam!

3/8" Bolt Size Capacity. "No. 24"

New cam design permits drawing threaded fasteners down faster and tighter BEFORE IMPACTING—the operation is speeded and fewer impact blows are required for final tightening.

Coupled with a large overload capacity, the new type wrenches are only moderately stressed in performing work within their rated capacity, resulting in greatly increased normal working life.

INDEPENDENT PNEUMATIC TOOL COMPANY
AURORA, ILLINOIS

Thor PORTABLE POWER TOOLS
ELECTRIC • PNEUMATIC

For more details circle NED-4150 on enclosed inquiry slip

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To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

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52

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees.....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

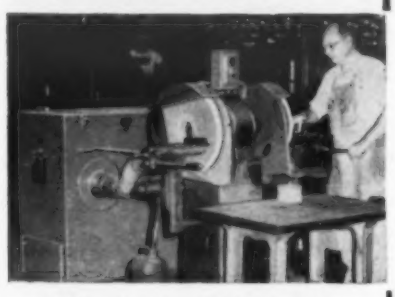
Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

STOP DUST

Instantly with DUSTKOP

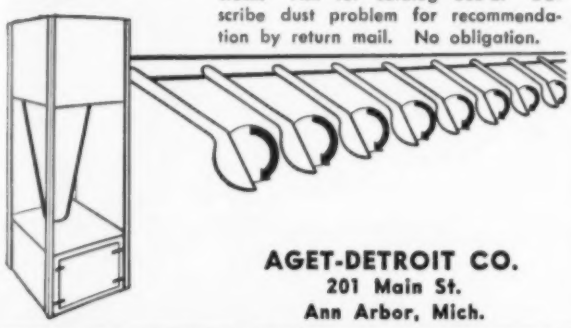


DUSTKOP ▶ 1400 cfm

▼ DUSTKOP 3600 cfm

300 cfm to 10,000 cfm per unit (22 models).

Standard, pre-tested, available from stock. Ask for catalog 605-2. Describe dust problem for recommendation by return mail. No obligation.



AGET-DETROIT CO.
201 Main St.
Ann Arbor, Mich.

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Now—Make More Copies at Lower Cost with Ozalid's Desk-Top OZAMATIC!

- The ideal machine for copying data sheets, reports, letters or drawings—anything typed, drawn or printed on translucent material!
- Top printing and developing speed of 30 feet per minute—or up to 1,000 letter-size copies per hour at a cost of less than 1½¢ each.
- Increases productivity of your larger Ozalid equipment—makes copies up to 16 in. wide, any length.

Remember—

All this in a streamlined, compact desk-top model!

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Send for free, illustrated literature.

Cut Copying Costs . . . Use **OZALID**

Johnson City, New York.
A Division of General Aniline & Film Corp. *"From Research to Reality"*.
Ozalid in Canada—Hughes Owens Co., Ltd., Montreal

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NEW LOCKER CATALOG

ANSWERS ALL YOUR CLOTHING STORAGE NEEDS!

- Presents a Complete Range of Locker Types and Sizes.
- Tells How to Provide More Storage in Less Floor Space.
- Gives Newest Ideas on Locker Room Layout, Ventilation, etc.
- Shows How to Make "Custom-Type" Installations with Economical Standard Lockers.
- Lists Ways to Save Time and Money when Ordering.

Send for Your Free Copy Today!

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SHELVING • CABINETS
Pioneer in Sheet Metal Products Since 1869

PENN METAL Corporation of Penna.
82 OREGON AVE., PHILA. 48, PA.

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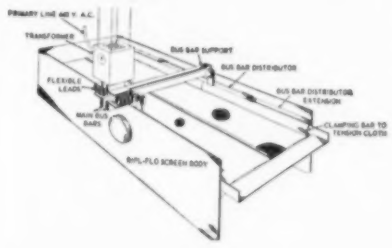
PORTABLE DISK GRINDER for industrial finishing operations

Developing speed of 8000 rpm, lightweight Diskette grinder can be used with one hand and is designed for continuous duty grinding, shaping and polishing of metals, wood, plastics and ceramics. It weighs 4½ lb, is compact enough to fit in tool kit and can be used in close quarters. Standard equipment includes three composition abrasive disks and oil resistant three-wire cord. Tool operates on 110-v ac or dc. Optional attachments include aluminum safety guard; flexible rubber disk to back recessed aluminum oxide disks; rubber pads for abrasive coated disks; hole-burring stud; hole polishing stud; collet chuck to hold variety of files, cutters and buffing wheels; spindle for rotary files and rasps; and bench stand which permits use of tool as bench grinder. Made by **Balmar Corp.**, Dept. N, Woodberry, Baltimore 11, Md.

▲ For more details circle NED-4154 on enclosed inquiry slip ▲

VIBRATING SCREEN HEATING UNIT minimizes clogging of wire screens

Blinding or clogging problems encountered in screening of coal, agricultural limestone or any fine moist material are eliminated with Thermo-Deck heating unit which uses standard steel clamping bars on screens as electrical conductors. Bars are free of electrical connections and current is carried by pressure contact from bus bars through clamping bars to screen cloth to provide uniform heat distribution over entire screen surface. Screen surfaces can be replaced without disturbing electrical connections. Standard steel clamping bars are used to tension cloth. Small air-cooled, dry-type transformers furnished with unit are dustproof and can be located on stationary supports adjacent to screen or suspended above it. They are equipped with four to six-step tap-changing switch to obtain desired change in voltage. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.



▲ For more details circle NED-4155 on enclosed inquiry slip ▲

DO YOU KNOW? Men in metalworking industries that use aluminum in any form will be intrigued with the large volume of information that is available in literature and moving pictures. The new Reynolds "Literature & Movie Index" tabulates 82 bulletins, catalogs and handbooks, dealing with effective use of aluminum, under headings of design, fabrication, application, products and general information. Seven motion pictures, most of them with sound and full color, are described briefly. To get your copy of this index, address Reynolds Metals Co., Desk A, 2500 S. Third St., Louisville 1, Ky.

▲ For more details circle NED-4156 on enclosed inquiry slip ▲

Many MANUFACTURING PLANTS *Use*

HYSTER® 20 Lift Trucks

MATERIALS HANDLING SUPERVISORS like the Hyster 20 because it transports fast, stacks high, gets in and out of tight places, rolls on pneumatic tires; is rugged and powerful.

OPERATORS like it because Hyster steers easily, carries and lifts loads smoothly, takes indoor and outdoor jobs in stride.

MANAGEMENT likes it because Hyster slashes manufacturing and warehousing overhead and adds to net profits.

See your Hyster dealer for an eye-opening demonstration and a list of owners. Or write for literature.

HYSTER COMPANY
Three Factories
2906 N.E. Clackamas, Portland, 8, Ore.
1806 North Adams St., Peoria 1, Illinois
1010-06 Meyers Street, Danville, Illinois

▲ For more details circle NED-4157 on enclosed inquiry slip ▲

one good crane led to another

. . . at Kilroy Structural Steel Co.

. . . And that is only part of their story. Another 74 foot overhead crane is on order for delivery to Kilroy.

For handling more tonnage faster, Kilroy, like many other industries, is "following the line of least resistance" by taking their materials handling problems to Robbins & Myers.

The Kilroy story—and a whole series of other solutions to handling problems are being published as *overhead handling case studies* by Robbins & Myers. To be assured of getting your copy, rip and clip this ad to your letterhead; tell us who you are, and your position please, and mail it to . . .

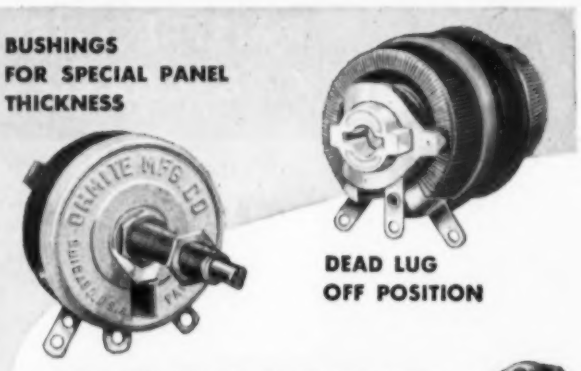
TAKE IT UP WITH

ROBBINS & MYERS INC.

HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO

▲ For more details circle NED-4158 on enclosed inquiry slip ▲

BUSHINGS FOR SPECIAL PANEL THICKNESS



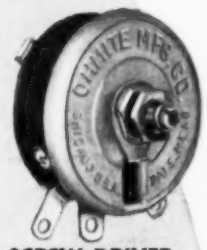
DEAD LUG OFF POSITION

OHMITE

CLOSE-CONTROL **RHEOSTATS**

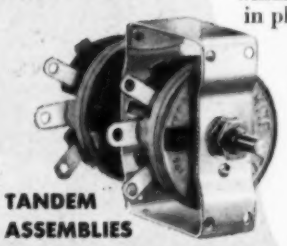
TOGGLE SWITCH

AVAILABLE WITH MANY SPECIAL FEATURES . . .



SCREW DRIVER SLOT SHAFT

Ohmite offers not only a line of *standard* rheostats, but also rheostats with a wide variety of *special features*. Illustrated are only a few. All have the distinctive Ohmite design features: smoothly gliding metal-graphite brush; all-ceramic construction; insulated shaft and mounting; windings permanently locked in place by vitreous enamel. You'll find the special rheostat feature you need in the dependable Ohmite line.



TANDEM ASSEMBLIES

OHMITE MFG. CO.
4843 Flournoy St.,
Chicago 44, Ill.

Write on company letterhead for Engineering Catalog No. 40.

Be Right with **OHMITE®**

RHEOSTATS • RESISTORS • TAP SWITCHES

▲ For more details circle NED-4159 on enclosed inquiry slip ▲

SWITCH NOW to Alnor

MOTOR-DRIVEN SWITCH

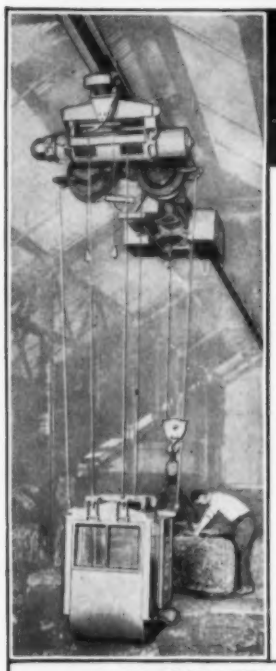
Wherever you now have a manually operated switch on your instrument board for closing a series of circuits one at a time, an Alnor Motor-Driven Switch provides a simple means of converting to automatic, continuous operation.

For example, if you have a pyrometer installation reading as many as 20 different temperature points, the Alnor Moto-Switch can be added to your present pyrometer to give continuous readings—on each station once every minute. Dial face can be easily read from 20 feet.

Available in 6, 11, 12 and 20 circuit models. Write today for Bulletin 4703 that gives complete details. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

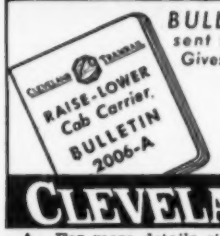
For more details circle NED-4160 on enclosed inquiry slip



RAISE-LOWER CAB CARRIER

Cuts Handling Costs ½ to ⅔

- Permits one man to handle all operations when moving materials with a cab-controlled overhead system. Operator lowers cab to floor or top of materials when attaching or detaching load on hook. No floor men needed. Carrier will not travel until cab is in high position. All motions motorized.



BULLETIN 2006-A sent free on request. Gives complete details.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6618 East 285th Street, Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle NED-4161 on enclosed inquiry slip

NOW YOU CAN HAVE TIME RECORDED

THE NEW Simplex TIME RECORDER

- Vertical or Horizontal Print • Two Color Registration • Trigger-touch Print • Direct Subtraction • One-Minute Positioning • Attractive, Indestructible Case • This NEW Simplex Time Recorder figures payrolls easier, 50% faster — cuts payroll costs in half.

ACCURATELY AUTOMATICALLY EFFICIENTLY

SIMPLEX TIME RECORDER CO., Gardner, Mass., Dept. N 11

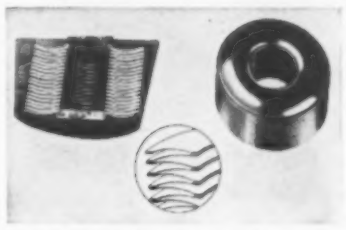
Please give us more information on:

☐ Payroll Recorder ☐ Time Cards ☐ Electric Time Stamp
☐ Watchman's Clock ☐ Time Card Files ☐ Time Card Racks

Firm.....
Name.....
Street & No.....
City..... State.....

For more details circle NED-4162 on enclosed inquiry slip

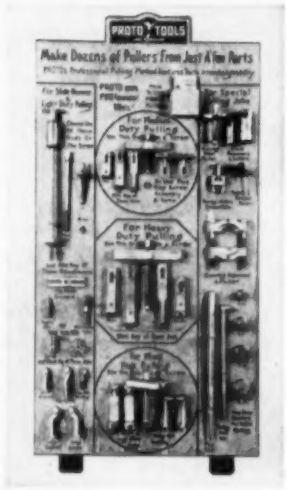
DIAPHRAGM BELLOWS made with insulated sections



Capable of withstanding pressures up to 500 psi and temperatures of 500° F, welded steel diaphragm bellows has insulated sections, designed for pressure switches and gages, noise attenuation and insulation of pipes, ducts or expansion joints. Called a Bellmet (a bellows with mechanical, electrical and thermal characteristics), it has metallic diaphragm sections, formed to a contour that prevents collapse under pressure, and assembled with alternating welds and plastic bonds. In pressure switch tests where arcing is a danger, bellows have been tested at 1000 v without flashover between adjacent sections. Bellmets can be used with fluids, gases or electrical power, as well as for noise suppression. Wide range of sizes are made by **Breeze Corps.**, 37 S. Sixth St., Newark 7, N. J.

For more details circle NED-4163 on enclosed inquiry slip

PULLER SET & RACK all tools are readily accessible for assembly and maintenance work



Suitable for maintenance and industrial plant use, No. SD6 Pullermart includes Proto master puller sets and convenient storage rack for tools. Individual parts of basic puller sets are arranged in "exploded" fashion. All parts are clearly labeled and located in proper order for ease of assembly to suit any desired application. Various components are interchangeable so that large number of set ups can be made by combining different units. For example, the heavy duty crossarm and screw can be used with either short, long, timing gear or cap screw jaws, thus providing four different pullers.

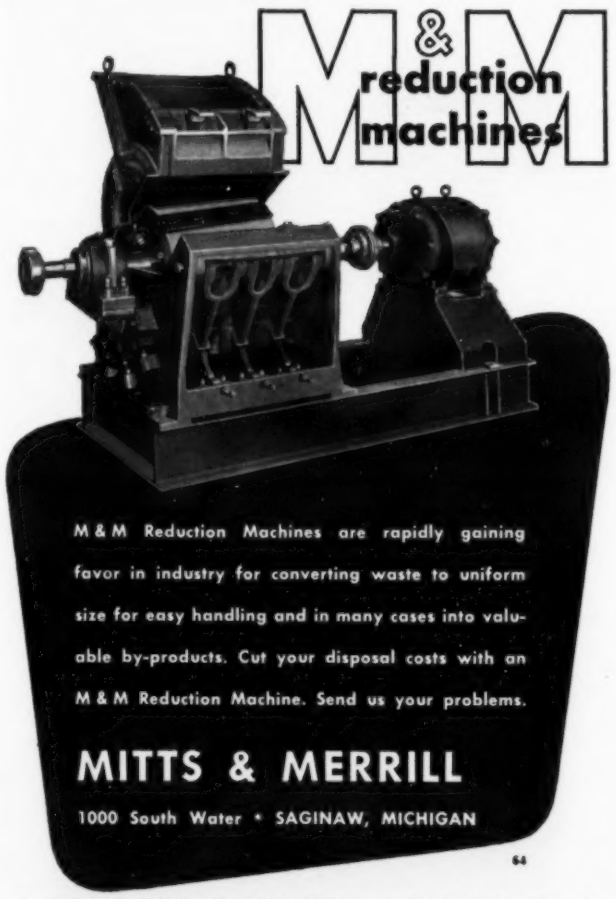
Wide lines divide the 3 x 5½-ft rack into five sections which enclose parts for four different pullers, plus a group of tools for special pulling jobs. Easel back holds rack upright for ease in selecting tool components. Made by **Plomb Tool Co.**, Dept. D, 2209 Santa Fe Ave., Los Angeles 54, Calif.

For more details circle NED-4164 on enclosed inquiry slip

Industrial Rubber Tires

Monarch Rubber Co.—"Catalog and Handbook of Industrial Tires" contains 32 pages of data on all types of solid and cushion rubber tires for materials handling vehicles and industrial mobile equipment. Care and selection of tires for specific service are dealt with. Guidance is offered to obtain maximum ton-mile service from tires. Included is tabulation of various materials handling equipment manufacturers' specifications for hand and power trucks and trailers.

For more details circle NED-4165 on enclosed inquiry slip

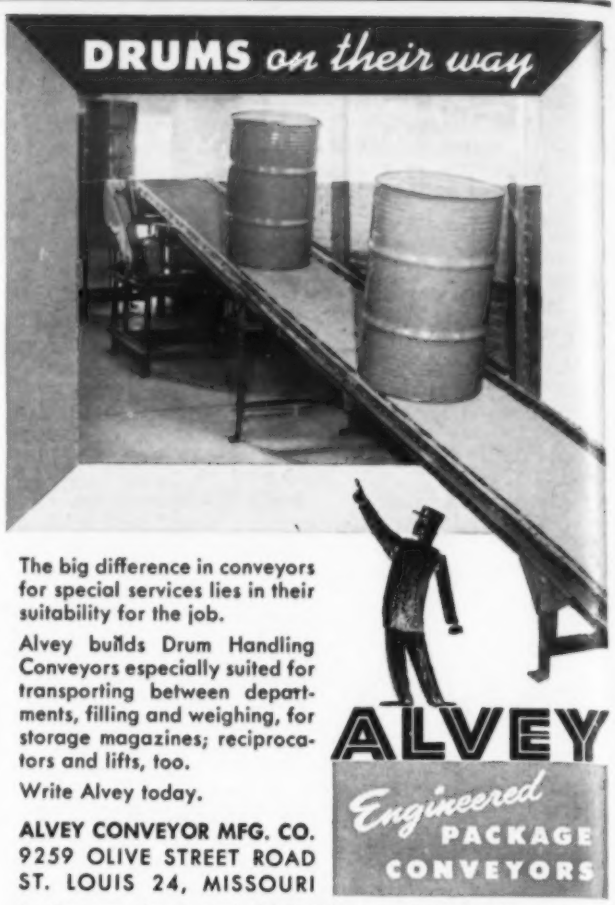


M & M Reduction Machines are rapidly gaining favor in industry for converting waste to uniform size for easy handling and in many cases into valuable by-products. Cut your disposal costs with an M & M Reduction Machine. Send us your problems.

MITTS & MERRILL
1000 South Water • SAGINAW, MICHIGAN

For more details circle NED-4166 on enclosed inquiry slip

DRUMS on their way



The big difference in conveyors for special services lies in their suitability for the job.

Alvey builds Drum Handling Conveyors especially suited for transporting between departments, filling and weighing, for storage magazines; reciprocators and lifts, too.

Write Alvey today.

ALVEY CONVEYOR MFG. CO.
9259 OLIVE STREET ROAD
ST. LOUIS 24, MISSOURI

ALVEY Engineered PACKAGE CONVEYORS

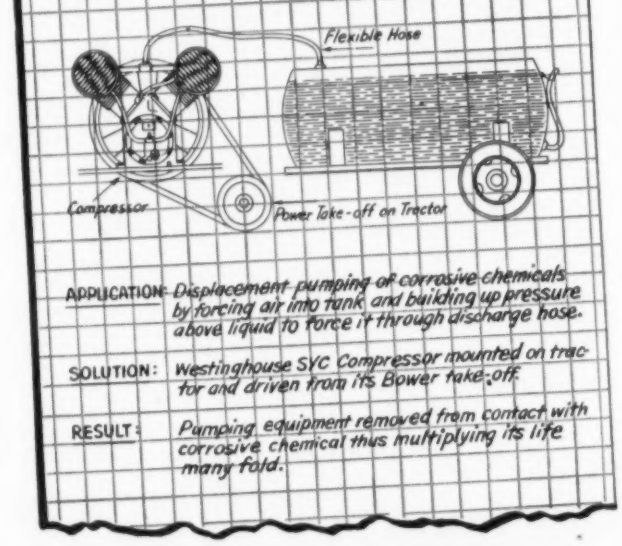
For more details circle NED-4167 on enclosed inquiry slip

Ideas for Engineers

INDUSTRIAL PRODUCTS DIVISION WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Datair Sheet #8

EQUIPMENT: Chemical Tank Truck



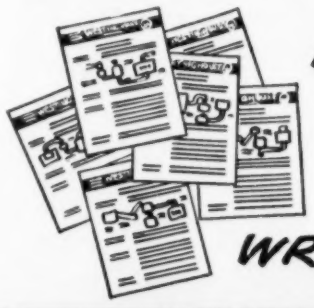
APPLICATION: Displacement pumping of corrosive chemicals by forcing air into tank and building up pressure above liquid to force it through discharge hose.

SOLUTION: Westinghouse SVC Compressor mounted on tractor and driven from its power take-off.

RESULT: Pumping equipment removed from contact with corrosive chemical thus multiplying its life many fold.

So often AIR Solves the Control Problem!

In case after case, Plant Engineers are using W A B Pneumatic devices to solve control problems. The case presented above is an example. Our Engineering Data File provides information concerning this and many others. Sections of it may be applied to your problems. Write for a complete file. No charge.



FREE This Engineering Data File

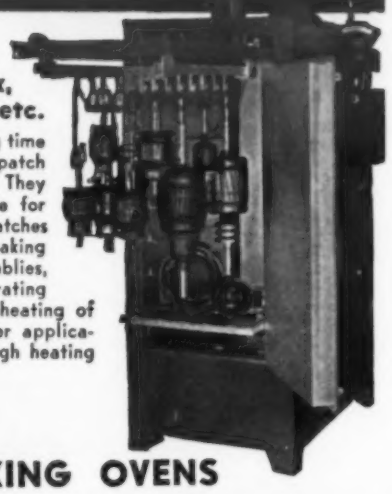
WRITE

INDUSTRIAL PRODUCTS DIVISION WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Factory Branch: EMERYVILLE, CALIF.
Distributors throughout the United States . . . Consult your Classified Directory. Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

For more details circle NED-4168 on enclosed inquiry slip

50% FASTER BAKING ON REPAIR JOBS



Ideal for Synthetic Films, Dulux, Lacquer, Enamel, etc.

You can often cut baking time up to 50% with Despatch R S Batch Type Ovens. They are extremely adaptable for finish baking of small batches such as armatures; for baking paints on grills, assemblies, etc.; for drying, dehydrating or core baking; for preheating of plastics, and many other applications where fast, thorough heating is required.

DESPATCH
R S Batch Type
FINISH BAKING OVENS

They're shipped fully erected and do not require an engineer to set them up. Gas or electric fired, very economical, with working range from 200° to 500° F. Automatic heat control for desired uniform temperature. Sizes from 11 to 90 cu. ft. capacity, all easy to load and unload. When writing for literature, kindly tell us what type of work you have.

Write for Bulletin on R S Ovens.

DESPATCH OVEN CO. Established in 1902

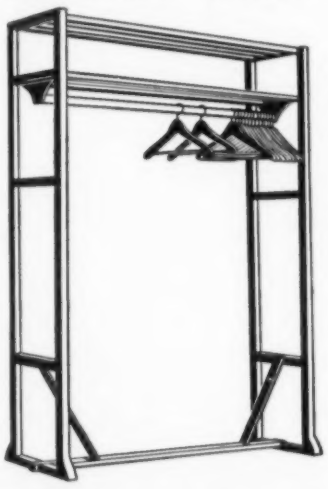
Manufacturers of ovens for:
Paint Finishing, Dehydrating, Curing, All Industrial and Laboratory Applications

325 DESPATCH BLDG., MINNEAPOLIS 14, MINNESOTA

For more details circle NED-4169 on enclosed inquiry slip

Checkerette

This "knock-down" wardrobe rack answers almost any "wraps" problem, because it can be set up anywhere in a few minutes without nuts, bolts or tools . . . can be disassembled and stored in small space when not in use. It is ideal for installation near point of work, occupies only 1' x 4' floorspace; is ideal for company cafeterias, offices, laboratories and meeting rooms.



It will hold wraps by day and shop coats at night and keep both aired and dry.

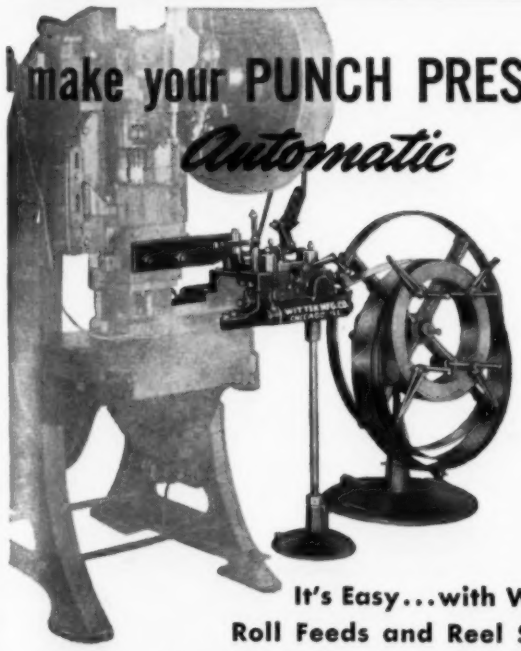
Modern, efficient designs, welded steel construction, rigid in use (all members held under tension).

Write for Circular CT 08

VOGEL - PETERSON CO.
624 So. Michigan Ave., Chicago 5, Ill.

For more details circle NED-4170 on enclosed inquiry slip

make your PUNCH PRESSES *Automatic*



It's Easy...with WITTEK Roll Feeds and Reel Stands

Wittek Roll Feeds handle any type of coiled strip stock and are made in single roll, double roll, and compound types with straighteners, in models to feed in any of four directions. They are reliable and accurate with simple, quick adjustment of feed length. Standard sizes and models meet a wide variety of press size and capacity conditions.

Wittek Reel Stands facilitate handling coiled stock.

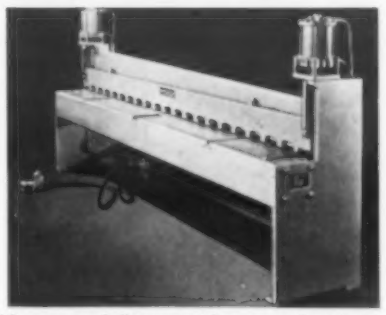
Write for full particulars

WITTEK Manufacturing Co.
4325 W. 24th Place, Chicago 23, Illinois

Automatic ROLL FEEDS AND REEL STANDS

For more details circle NED-4171 on enclosed inquiry slip

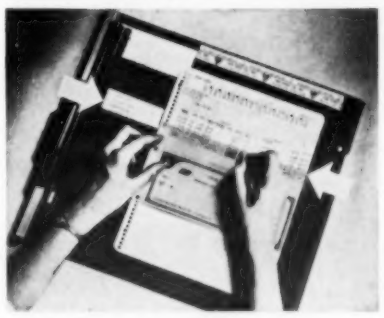
SQUARING SHEARS operate on 70-80 lb air line



Minimum of mechanical working parts are incorporated in line of squaring shears which operates on average shop air line of 70 to 80 psi or small air compressor and surge tank. Depressing the foot valve automatically clamps the holddown and lowers the crosshead to complete the cut. Releasing the treadle instantly returns them to top position. The treadle can be moved to any convenient location as it has a flexible air hose. Main shear components are formed of welded steel plate. Adjustable ways are of nonmetallic laminated plastic. The holddown gives clear visibility of the cutting line. A quick-adjusting back gage is standard equipment on the smaller sizes, and a micrometer parallel back gage graduated in 1/128-in. is featured on 8 and 10-ft widths. Made by **Niagara Machine & Tool Works,** Northland Ave. & Chelsea St., Buffalo 11, N. Y.

For more details circle NED-4172 on enclosed inquiry slip

FORM POSTING BOARD for payrolls and accounts payable



Single, convenient posting position for all entries is feature of this Form-Master board for one-write posting of payrolls, accounts payable and accounts receivable. Payroll summary or journal sheet is moved into posting position, entry by entry, by finger-touch control bar. This bar clicks into perfect alignment through a series of automatic stops. Clean-jacketed carbon is slipped over top of summary or journal sheet. Records used with board are collated automatically into alignment through an arrangement of pegs on the control bar and adapter. Previous postings are visible easily for reference without disturbing the forms. Boards are available in 16 x 14½ in. and 21 x 20 in. sizes. Both are finished in soft green and grey to eliminate eye strain and glare. Made by **Todd Co.,** P. O. Box 910, Rochester 3, N. Y.

For more details circle NED-4173 on enclosed inquiry slip

Electronic Potentiometers

Bristol Co.—Line of Dynamaster electronic strip chart potentiometers and bridge instruments for industrial plant, pilot plant, process, research and laboratory use are described in 36-page illustrated bulletin No. P1245. Instruments for recording and indicating such variables as temperature, pH, speed, voltage, power, smoke density, thickness, strain and others are covered. Single and multiple point recording models, plus pneumatic and electric automatic control models are described.

For more details circle NED-4174 on enclosed inquiry slip

CUT YOUR SWEEPING COSTS 75%

Free DEMONSTRATION PROVES IT

with

WILSHIRE POWER SWEEPERS

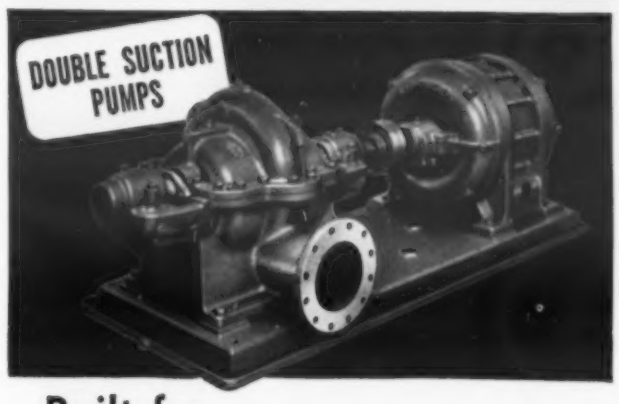
Costs in general may continue to go up, but here's one you can really cut...the cost of keeping your floors swept. WILSHIRE Power Sweepers not only cut your sweeping costs...they sweep cleaner, without dust. In the average plant, they pay for themselves in 10 to 12 weeks.

Write for the name of your nearest WILSHIRE Dealer who will be glad to give you a Free Demonstration right in your own plant.

WILSHIRE POWER SWEEPER CO.
516 WEST CHEVY CHASE DRIVE • GLENDALE 4, CALIFORNIA

IN CANADA—PLANT MAINTENANCE EQUIPMENT CO.—VANCOUVER, TORONTO

For more details circle NED-4175 on enclosed inquiry slip



Built for LOW MAINTENANCE

GENEROUS CONSTRUCTION with extra metal thicknesses, extra strong parts, extra construction features and extra careful workmanship means lower pumping costs for you. Every pump tested on most modern equipment in industry. Each installation individually engineered.

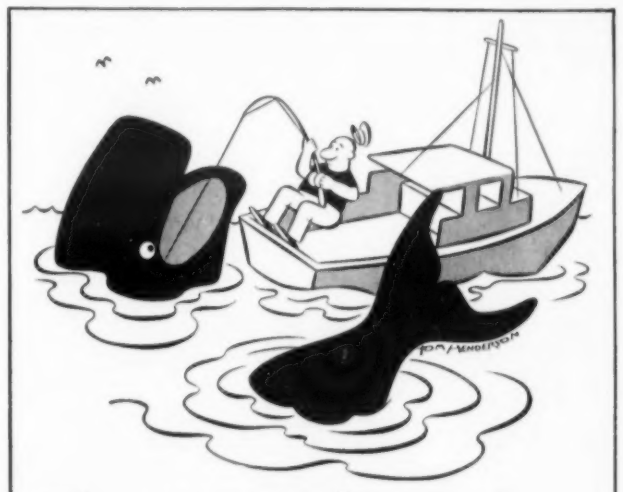
Horizontally split casing, ball bearings, balanced impeller, wearing rings, hand finished water passages, cast shaft sleeves, generous stuffing box length. Choice of iron, bronze, stainless steel.

Standard sizes from 10 to 7000 gpm with 475 foot head. Larger sizes available. For complete information, call your Allis-Chalmers Office, or write Allis-Chalmers, Milwaukee 1, Wisconsin for bulletin 08B6146.

A-3320

ALLIS-CHALMERS

For more details circle NED-4176 on enclosed inquiry slip



There's a Yale hoist for *every* lifting job!

IF YOUR PROBLEM is to save manpower—increase production—speed lifting of any weight from 500 lbs. to 40 tons—get in touch with YALE. For YALE has pioneered in the development of safer, more efficient hoisting equipment of every kind. That's why your YALE Distributor can give you such valuable assistance in choosing the *right* hoist for your particular needs. He's listed in your Classified Directory, and ready to help you any time.

Illustrated is *portable* Load King Aluminum Hand Hoist. Half-ton model weighs *only 36 lbs.* Ball bearings in all rotating shafts minimize friction ...raise hoist efficiency *up to 95%*. Precision-engineered safety features include SYNCHRO-MATIC Load Brake, fracture proof steel Safety Hooks.

CAPACITIES:
½, 1, 1½
and 2 tons

YALE & TOWNE

The Yale & Towne Manufacturing Co., Phila. 15, Pa.

YALE is a registered Trade Mark of The Yale & Towne Mfg. Co.

MAIL THIS COUPON TODAY

The Yale & Towne Manufacturing Co., Dept. 375
Roosevelt Blvd. & Haldeman Ave., Phila. 15, Pa.
I'm interested in lifting for less with a YALE Hoist.

☐ Please have your local Distributor call on me.
☐ Please send detailed literature on ☐ YALE Hand Hoists. ☐ YALE Electric Hoists.

Company_____
Name_____ Title_____
Street_____ City_____ State_____

In Canada write: The Yale & Towne Manufacturing Co., St. Catharines, Ont.

YALE GAS AND ELECTRIC INDUSTRIAL TRUCKS • YALE WORKSAVERS
YALE HAND TRUCKS • YALE PUL-LIFTS

For more details circle NED-4177 on enclosed inquiry slip

LIGHTWEIGHT COMFORT AT ANY TIME . . .
Particularly Desirable in Warm Weather!

In hot or humid working atmosphere this Respirator is especially welcome because of its light weight (1½ oz.). Simply constructed, economical, it consists of a smooth, rubber mask and a permanent type filter. Recommended for protection against pneumoconiosis-producing and nuisance dusts such as silica, borax, carbon, glass, grain, graphite, cement, limestone, gypsum, coke, charcoal, wood, pollen, flour and aluminum. APPROVED BY THE U. S. BUREAU OF MINES—BM2137. Ask your AO Safety Products Representative.

American Optical
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches In Principal Cities

For more details circle NED-4186 on enclosed inquiry slip

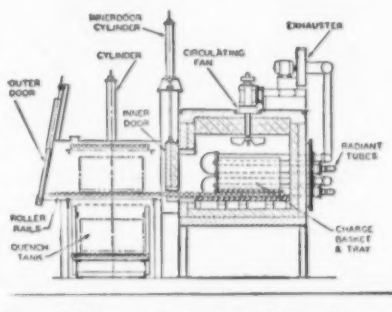
TRACTOR-MOUNTED CONVEYOR handles bulk or solid materials

Variety of materials, including wet concrete, bricks, lumber, pipe, shingles, sand, coal, kegs, bags and rolls can be handled by Con-Vay-It Special 12-30 conveyor mounted on International Farmall Cub and Super A tractors. Rubber, wood or plastic scrapers are used to reduce belt wear. Conveyor will move from 1 to 3 cu yd of concrete per minute, depending upon elevation. Belt, trough, baffle plate, hoppers and scrapers are designed to prevent separation of concrete or mortar being conveyed. Some tractor modifications are required, such as extending front wheels by extending front axle, extending rear wheels by dishing them to the widest tread, placing water in left rear tire and installing wheel weights. Modifications vary with tractor used. Power take-off is used to drive hydraulic pump which powers conveyor. Made by **American Conveyor Co.**, 1113 W. Adams St., Chicago 7, Ill.

For more details circle NED-4188 on enclosed inquiry slip

HEAT TREATING FURNACE has enclosed oil quench

Standard Allcase heat treating furnace is a batch type unit featuring radiant tube firing, recirculating fan and enclosed quench. Gross heating rate is up to 500 lb per hour. A larger unit handles up to 1600 lb per hour. Loads are handled in baskets on trays for all controlled atmosphere processing with or without quenching. Four removable alloy radiant tubes, with exhausters, and an alloy high speed recirculating fan provide uniform heating in range of 1400 to 1750° F for even the densest loads. A totally enclosed atmosphere oil quench with agitator and elevator provides rapid direct quenching. One load is quenching while the furnace is being recharged, making it a one-man operation at all times. Made by **Surface Combustion Corp.**, Dept. D, 2375 Dorr St., Toledo 1, O.



For more details circle NED-4189 on enclosed inquiry slip

What's a Silicone?

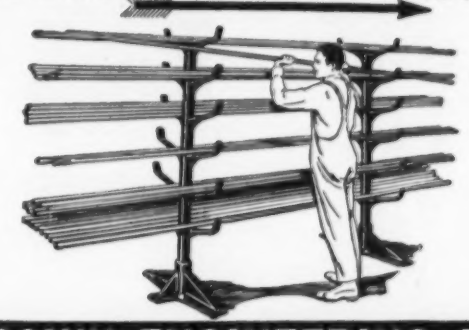
Dow Corning Corp.—If you are one of the multitude of people that have asked what a silicone is, and have never received a satisfactory answer, then this 32-page illustrated booklet should be of value to you. Besides being argano-silicon-oxide polymers (to a chemist), silicones are products that keep brick walls dry in the rain, polish without rubbing, make rubber that won't melt or freeze under most conditions, help formulate insulating resins, varnishes, lubricants, and so on.

For more details circle NED-4190 on enclosed inquiry slip

SPEEDS UP STOCK-ROOM SERVICE

The BROWN TIME-SAVING RACK saves the time previously lost end-hauling each bar of stock its entire length from the old-style closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time, and returned to their production machines to turn out a maximum of output. Any time you require additional storage space, all you need do is to add more units. If you want to relocate it at any time, you can do so for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn, warp, sag or twist: depreciation is practically nil. SEND FOR BULLETIN No. 26-D DESCRIBING—

BROWN'S QUICK-SERVE RACKS



BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

For more details circle NED-4193 on enclosed inquiry slip

WOLVERINE
STANDARD PRODUCTS
• • •
TOGGLE CLAMPS
QUICK • POWERFUL

Preferred for many years by leading manufacturers and reputable engineering companies, Wolverine Toggle Clamps are available in a variety of styles and sizes.

WOLVERINE CONVEYOR ROLLERS
• • •
Neoprene Sponge

Wolverine Rubber Conveyor Rollers are made of an oil and abrasion resistant Neoprene sponge rubber, supported on dual ball bearings and mounted with a standard ½" bolt and nut assembly.

WOLVERINE SAFETY TONGS
LIGHT • DURABLE

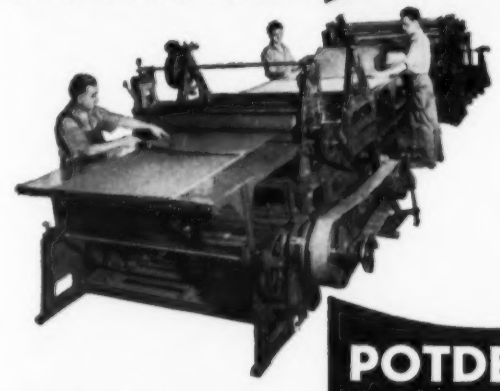
Designed to embody all of the elements essential to safe and efficient punch press feeding, Wolverine Safety Tongs are light, strong, and durable.

WRITE FOR BULLETINS
WOLVERINE TOOL CO.
1482 E. Woodbridge Detroit 7, Mich.
A reliable source for special tools, fixtures and machinery parts.

For more details circle NED-4187 on enclosed inquiry slip

POTDEVIN
50" wide conveyor
GLUING MACHINE
and
COMBINING PRESS

60 years of dependable service



Handles webs or sheets. Thermostat control for hot glues. Patented dial control regulates coating of adhesive. Single adjustment for overall pressure of combining rollers.

Consult our engineers on any coating problem. Literature on request.

POTDEVIN MACHINE CO.
273 North Street
Teterboro, N. J.

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

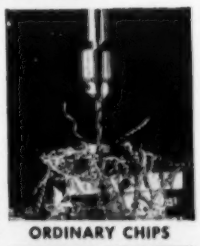
For more details circle NED-4194 on enclosed inquiry slip

SHALLOW HOLES . . . DEEP HOLES
DRILL THEM ALL FASTER, BETTER

WITH A Commander
DRILL CHIP BREAKER

✓ Small Chips Permit 50% — 400% Increase in Drilling Speeds
✓ Drill 10 Diameters or More in Depth Without Clearing Drill
✓ Better, Smoother, More Accurate Holes

Reciprocating action of the Commander Drill Chip Breaker breaks chips into small pieces that travel up drill flutes . . . permitting higher drilling speeds . . . doubles and triples production of shallow OR deep holes. Long chips which cause drill breakage, scored holes, slow jig and fixture loading, are eliminated—small, easy to handle chips flow up out of hole continuously, permitting coolant to reach cutting edge of drill. Assures longer drill life, more holes per sharpening, more holes per hour.



ORDINARY CHIPS

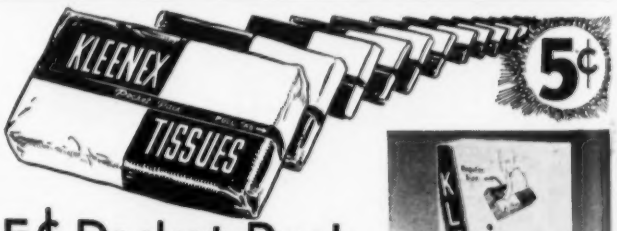
CHIP BREAKER CHIPS

Your nearby COMMANDER Distributor has the Drill Chip Breaker and other Commander Production Tools.

Write FOR CATALOG #851 which describes Commander's Production Tools

Commander MFG. CO.
4220 W. KINZIE STREET
CHICAGO 24, ILLINOIS

For more details circle NED-4192 on enclosed inquiry slip



5¢ Pocket Pack
NOW AVAILABLE IN YOUR RESTROOMS WITH
VEND-MASTER

This handsome Vend-Master dispenser provides a healthful sanitary service appreciated by both men and women. "Pocket-Pack" contains 24 regular size Kleenex Tissues. Just the thing for pocket or purse. Dispenser may be either mounted on wall or on a pedestal type stand as illustrated.

Here is a convenience that pays its own way. Order your VEND - MASTER TODAY.

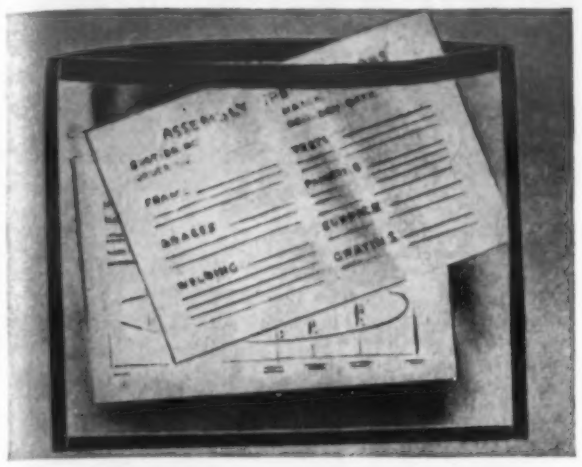
$49.50 (Pedestal Stand $15.00)

DISTRIBUTOR INQUIRIES INVITED

MANUFACTURED BY
VEND-RITE MFG. CO.
1534 N. Halsted St., Dep't.-K, Chicago 22, Ill.

For more details circle NED-4195 on enclosed inquiry slip

WANTED!
1000 PLANT EXECUTIVES



TO TEST THIS PLASTIC ENVELOPE FREE Worth 26c

Test this FREE Job Ticket Envelope in your plant. See how production records, job orders, charts, etc. stay crisp and clean despite constant handling. Now, you can eliminate doubts, errors and wasted time due to blurred, grease-stained figures. Send for circular #B-2, which illustrates the many practical uses for these rugged envelopes . . . not only on the production end, but in the office as well.

AMERICAN KLEER-VU PLASTICS, INC.
57 Thames St. Brooklyn 37, N. Y.

▲ For more details circle NED-4196 on enclosed inquiry slip ▲

MORE SPEED MORE SUPPORT

NO FRICTION—
STRONG "BLADE" PROTECTION

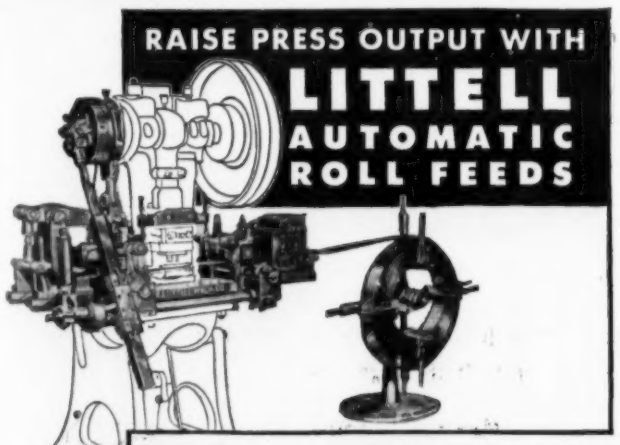
Ball-bearing wheels turning with Band-Saw Blade makes PADDOCK BAND-SAW GUIDES more efficient in turning out more work—cutting more materials — and reducing blade breakage. Ball-bearing wheels are inter-changeable to balance wear. When a 36" machine is equipped with Model 20 guides and the guides are adjusted to hold the blade at a 45° angle, material 22 inches thick can be cut to any length.

Lower picture at right shows angular adjustment. Write, giving size of machine and material being cut. We will gladly give information, quote prices and make recommendations.

PADDOCK TOOL CO.
Guide Makers Since 1920
1418 Walnut St. Kansas City 6, Mo.

Paddock
BALL-BEARING
BAND SAW GUIDES

RAISE PRESS OUTPUT WITH
LITTELL AUTOMATIC ROLL FEEDS



Press room output can often be multiplied five times by the simple addition of Littell Automatic Feeds to present equipment. The typical Littell Double Roll Feed shown here grips the stock on both sides of the die to assure maximum traction and feeding power. Stock is easier to start and finish in progressive die work. No hand feeding at either end of the stock. Rack and pinion drive provides the smoothness and the gradual acceleration and deceleration of feed rolls for a truly accurate feed. Standard Littell Automatic Feeds serve all types and sizes of presses, handle all standard widths and thicknesses of stock.

Installed on old or new equipment

Write for catalog

F. J. LITTELL MACHINE CO.

ROLL FEEDS • DIAL FEEDS • STRAIGHTENING MACHINES • REELS • AIR BLAST VALVES
District Offices: Detroit, Cleveland
4169 N. Ravenswood Ave., Chicago 13, Illinois

WHEN YOU BUY FROM LITTELL . . . YOU PURCHASE A PACKAGE OF SATISFACTION

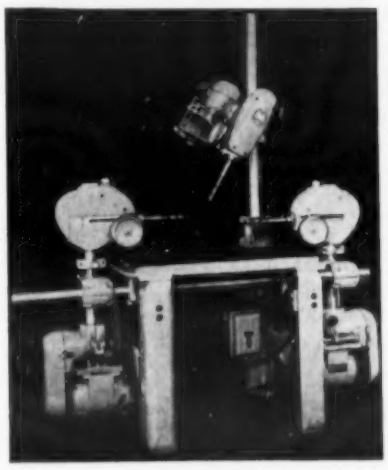
▲ For more details circle NED-4197 on enclosed inquiry slip ▲

TELESCOPIC TOWER reaches 30 ft above floor

Starting as a 6-ft tower, the Hi-Lift electrically operated telescopic tower extends to its full height of over 30 ft in less than 5 minutes. It is easily handled through door and elevator openings, has roller bearing swivel casters on all four legs and outriggers for extra stability. Operation is by one man. Tower can be partly extended to any desired height for use in cleaning, maintenance and other operations. Made by **Atlas Industrial Corp.**, 845-ND 39th St., Brooklyn 32, N. Y.

▲ For more details circle NED-4198 on enclosed inquiry slip ▲

DRILLING MACHINE standardized units quickly set up for multiple drilling in any plane



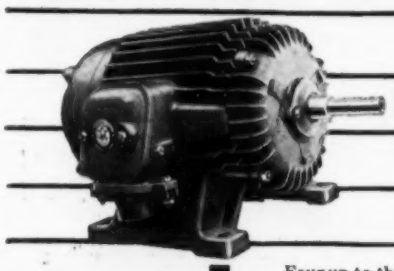
Limitations on locating drills or similar tools in relation to workpieces are removed by the Magna Drill industrial drilling machine which makes possible quick, accurate setups for simultaneous multiple drilling in more than one plane. Unit consists of standardized individually - powered adjustable drill heads with a mounting system of ground steel tubes and joint castings that permit a flexibility in locating any number of spindle axes independent of each other.

Each spindle operates individually with the proper rpm, correct feed rate, preset drilling pressure and depth limitation for the operation it is performing. Heads can take any attachment and perform any operation practical on other drilling machines. Mechanical or air-powered feeds, which are packaged units driving directly on the quill front, can be attached in a few minutes. Magna Drill has a capacity of 1-in. hole in cast iron or ⅜-in. hole in steel. Stroke is 5 in. and throat is adjustable from 6½ in. minimum to 14-in. maximum.

Each head has its own 1 hp motor. Clearance is 32 in. under spindle tip at maximum height. Narrow head design permits drilling on 6-in. centers, but by opposing heads horizontally, 0-in. centers can be attained. Cam-actuated motor mount gives seven spindle speeds; maximum range is from 251 to 6860 rpm. Vernier protractors simplify adjustment. Units are offered in components: drill head; supporting column and base; and modular production tables which can be used singly or ganged. Made by **Magna Engineering Corp.**, Dept. NED, 110 Linfield Dr., Menlo Park, Calif.

▲ For more details circle NED-4199 on enclosed inquiry slip ▲

ACEC
Electric Motors are backed by



70 YEARS' DESIGNING AND ENGINEERING EXPERIENCE

NOW ON HAND
Integral Horsepower Electric Motors—conforming strictly to NEMA SPECIFICATIONS

FULLY GUARANTEED

MOTORS EXCEEDING 200 HP. BUILT TO ORDER

Four up-to-the-minute plants producing the finest type electrical equipment, that's ACEC — Ateliers de Constructions Electriques de Charleroi, Belgium.

And world-famous ACEC motors are now *immediately available* to American customers from warehouse stocks in the United States.

In addition, a network of ACEC Distributors and Service Shops, from coast to coast, is prepared to handle customers' service needs promptly and efficiently.

Whatever your motor requirements, write, wire, or telephone the nearest ACEC office or representative.

IMMEDIATE DELIVERY from NEW YORK • CHICAGO • KANSAS CITY NEW ORLEANS • DALLAS and LOS ANGELES Warehouses

BELGIAN ELECTRIC SALES CORPORATION
Main Office: ONE E. 53RD ST., NEW YORK 22, N. Y. • PLAZA 8-3105

BRANCHES AND AGENCIES: Los Angeles • San Francisco • Chicago • Kansas City • Cleveland Dallas • New Orleans • Pittsburgh • Louisville • Washington, D. C. Youngstown • Savannah • Montreal • Puerto Rico • Mexico City

▲ For more details circle NED-4200 on enclosed inquiry slip ▲

9800 American industrial leaders depend on Kroil when a frozen bearing, bushing or bolt threatens production or starts to cost expensive man hours.

During eleven years they have learned that it pays to use Kroil first and save parts. In these days of critical materials, shops cannot afford to use hammer-and-chisel methods when stuck-together parts cause trouble.

What Users Say!

"Five men using levers and sledges worked for an hour with a frozen shaft . . . one man used Kroil and lifted the shaft out with no leverage" . . . "Before trying Kroil we broke off every nut (on our heat treat quench trolleys) . . . since then we have not lost one and have decreased the repairing time from 30 minutes to about six minutes per trolley."

Try Kroil at our risk. Send for a gallon—use it under the worst conditions you have. Return it for full credit if not satisfied. Kroil, $3.50 a gallon; Kroiler, $1.50 each . . . together, $4.75, f. o. b. Nashville.

KANO LABORATORIES
1074 Thompson Lane, Nashville 11, Tenn.

▲ For more details circle NED-4201 on enclosed inquiry slip ▲

NEW!

THE
COPYFLEX "30"
High Speed—Low Price—Premium Prints

Here, for the first time, is a copying machine—Bruning's Model "30" COPYFLEX—that combines such a *high speed* with such a *low price* and such *premium quality*, ready-to-use prints.

The "30" is ideal for the drafting room or office with medium volume requirements and a moderate budget. It handles cut sheets or roll stock up to 42 inches wide, and offers features ordinarily found only in larger, more expensive machines.

With the "30" and the unsurpassed line of sensitized COPYFLEX papers, cloths and films, you can always get exactly the kind of premium quality prints you want, when you want them.

See how COPYFLEX "30" can save your time, cut your costs. Write for Booklet A-2030 to CHARLES BRUNING CO., INC., Dept. C52 Teterboro, N. J.

BRUNING
Specialists in copying since 1897

▲ For more details circle NED-4202 on enclosed inquiry slip ▲

$34.50

Sands
Cleans
Smooths
Polishes

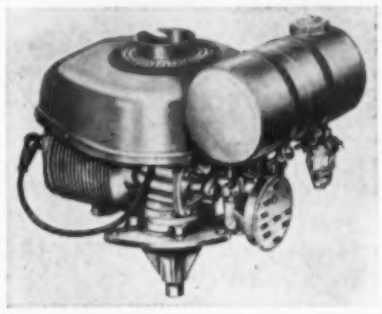
Three 4½" x 6½" coverings cut from standard 9" x 11" abrasion sheet.

Makes a hundred tedious jobs fast and easy. Will sand to the bare wood or metal, featheredge, or smooth and polish to a "piano finish." Powerful direct-connect, 3450 r.p.m. 110 v., A.C. air-cooled motor. No gears, nor gear-housing to collect grit and dust. Sealed ball-bearing thruout. Cast-aluminum body and chrome plated—in hand weight only 5 lbs. Natural grip, all-position handle with sliding thumb switch and 3 wire rubber-covered cord.

Speed Way MANUFACTURING CO.
1892 So. 52nd Avenue • Cicero 50, Illinois

For more details circle NED-4203 on enclosed inquiry slip

LIGHTWEIGHT GASOLINE ENGINE
aluminum construction used in horizontal and vertical models



Weighing approximately 15 lb, vertical model 2701 (illustrated) and horizontal model 2751 two-cycle air-cooled gasoline engines develop 1.6 hp at 4000 rpm. One-piece cylinder-crankcase aluminum die-casting is fitted with cast-in iron sleeve. Reed valve assures smooth, steady operation over wide speed range. Adjustable air-vane type governor can be set to maintain engine speed automatically over wide variations in load.

Standard engine has automotive type carburetor, high-tension magneto, gas tank, fuel filter, governor, rope starter and standard crankshaft. Optional equipment includes antifriction bearings, extended crankshaft, internally splined crankshaft, concentric bowl carburetor that permits operation at tilts up to 45 degrees, remote stop control, remote throttle control, fuel pump, auxiliary 5½-gallon fuel tank and ignition shielding.

Ample cooling is afforded by large centrifugal blower on flywheel combined with large number of cylinder fins. Fan housing screen prevents dirt from entering or clogging cooling system. Mounting bracket assures concentricity of extended main bearing. Air cleaner removes harmful dirt from air before it enters the carburetor. Recommended outputs are 1.3 hp at 3000 rpm, 1.5 hp at 3600 rpm and 1.6 hp at 4000 rpm. Choice of horizontal and vertical shaft models adapts engines to wide range of power equipment. Made by **West Bend Aluminum Co.**, 92 Island Ave., West Bend, Wis.

For more details circle NED-4206 on enclosed inquiry slip

NO DOWNTIME
in over a year using
a PLATECOIL in
REPLACES PIPE COIL
a parkerizing tank

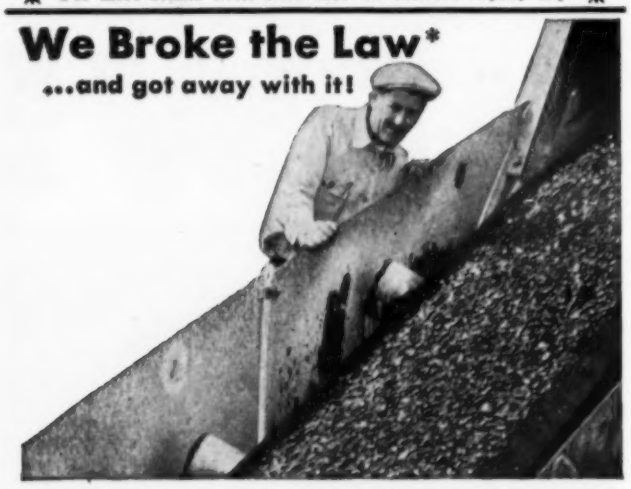
The only time this Platecoil was removed in over a year was to take its picture. The single 22" x 23" Platecoil has heated a 100-gallon Parkerizing tank, in daily use, *without downtime* at the Lycoming Spencer Division of Avco Corp. Built of Electro-Polished Stainless Steel, the Platecoil has required no cleaning or repairs. Platecoils will replace pipe coils at a savings in any heat transfer application.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL
Division
KOLD-HOLD MFG. CO.
LANSING 4, MICHIGAN

For more details circle NED-4209 on enclosed inquiry slip

We Broke the Law*
...and got away with it!



Crushed wet rock at Henry J. Kaiser's Radum Plant near Pleasanton, California, just naturally wanted to roll downhill. This presented a serious obstacle to the plans of Kaiser engineers, who were trying to increase tonnage at the sizing screens without the expense of installing an elevator system to lift this extremely wet and muddy rock. Outlining their problem to the Gilmore Steel & Supply Company representative, the Kaiser men were introduced to the use of Boston Woven Hose & Rubber Company's Bull Dog Herringbone Conveyor Belting. This belt, shown here, features a unique top cover of molded chevron designed rubber steps for uphill conveying and provides efficient drainage of water and mud from the belt surface.

Now in service only a little over 16 months, the BWH belt has already established a record of high tonnage at low cost.

If your application calls for a special construction, let us demonstrate how dependable BWH products can help boost your production and profits, while lowering your costs.

*We refer, of course, to Newton's law of gravity.

Another Quality Product of
BOSTON WOVEN HOSE & RUBBER CO.
Distributors in all Principal Cities
PLANT: Cambridge, Mass. • P.O. Box 1071, Boston 3, Mass., U.S.A.

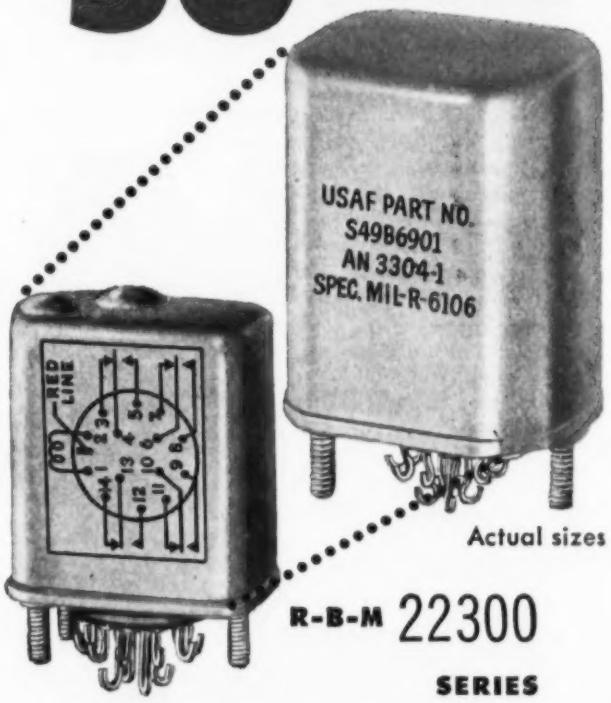
For more details circle NED-4204 on enclosed inquiry slip

SEQUENCE COUNT-CONTROLLER
controls successive operations

Several successive operations are automatically controlled by the sequence count-controller by accurately counting the number of operations required for each phase. Instrument automatically counts the preset quantity for the first stage, then operates a control switch which may be used to start the second phase, then automatically starts counting operations of the second stage, etc. Use is to control interrelated operations in machining and processing, to count different quantities of different items into containers and to operate various types of automatic machines, such as stator winders. Sequence count control can be provided for practically any number of consecutive operations and almost any quantity can be counted in each phase. Quick selection or change of count quantity can be provided. Made by **Production Instrument Co.**, 700-12 W. Jackson Blvd., Chicago 6, Ill.

For more details circle NED-4207 on enclosed inquiry slip

50% SMALLER LIGHTER



Actual sizes

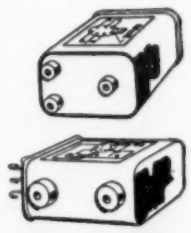
R-B-M 22300 SERIES

Hermetically Sealed Relays

The R-B-M 22300 hermetically sealed telephone type relay is the electrical and mechanical equivalent of AN 3304-1, except for smaller size and mounting dimensions.

An improved armature design, plus high temperature molded nylon coil bobbin, provides greatly improved magnetic efficiency and enables R-B-M to reduce the overall size of the relay. The R-B-M 22300 design still retains palladium cross-bar contacts identical to those used in the larger size.

Maximum contacts—6 Form A and 4 Form C—3 ampere 28 Volts. D. C. coil construction only. Maximum coil resistance 5000 ohms. Minimum power .75 watts. Also available in AN 3304 can for dynamotor or low capacitance application.



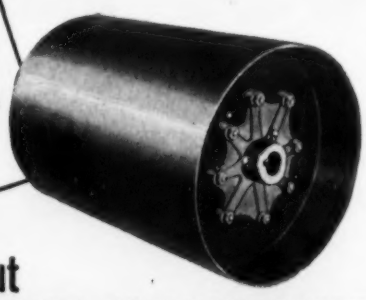
Optional Mounting Arrangements

Write Dept. K-5 for ASR Bulletin.

RBM
R-B-M DIVISION
ESSEX WIRE CORP.
Logansport, Indiana
MANUAL AND MAGNETIC ELECTRIC CONTROLS
FOR AUTOMOTIVE, INDUSTRIAL, COMMUNICATION AND ELECTRONIC USE

For more details circle NED-4210 on enclosed inquiry slip

FACTS you should know



about
AMERICAN ALL STEEL CONVEYOR PULLEYS
for belt conveyors and elevators

Built by the original manufacturers of steel split pulleys in four standard constructions . . . a pulley for every service over 400 sizes. All steel construction for maximum strength —minimum weight.

- TYPE "G"—split type for mounting between bearings or hangers.
- TYPE "L"—for light duty—top quality at minimum cost.
- TYPE "N"—for general duty—interchangeable tapered-fit hubs for flexibility and minimum inventory investment.
- TYPE "HD"—for heavy duty—split tapered hubs for "shrink-fit" on shafts.

In any size, any style, American Conveyor Pulleys are produced by controlled, precision methods. Large factory, warehouse and distributor stocks for prompt service. Put them to work for you.

Use the coupon today for information and literature.

POWER TRANSMISSION by
AMERICAN PULLEY COMPANY

The American Pulley Company
4294 Wissahickon Ave.
Philadelphia 29, Pa.
Gentlemen:
Please send me complete information on American Conveyor Pulleys.
NAME _____
FIRM NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-4205 on enclosed inquiry slip

AJUSTRITE
TRADE MARK
AUTOMATIC ADJUSTABLE STOOLS

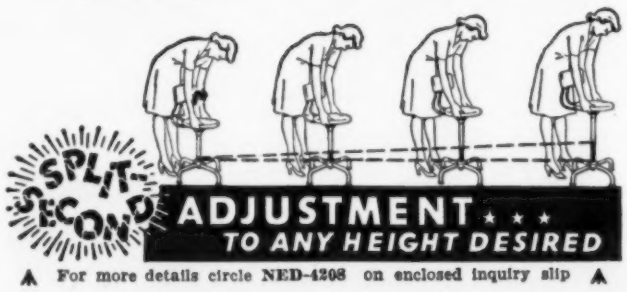
RSS Models

Ajustrite (formerly Kewaunee) adjustable stools and chairs are used extensively in Factories, Laboratories, Hospitals, Offices, Schools, Colleges and Government Agencies. User adjusts to any desired height—instantly.

Choice of 7 models. Height adjustment 15" to 20"; 18" to 26"; 24" to 35". May be equipped with adjustable back rest, foot rest, seat cushion.

Write for literature and free trial offer.

AJUSTO EQUIPMENT CO.
2144 Madison Ave. Toledo 2, Ohio



For more details circle NED-4208 on enclosed inquiry slip

LOOKS GOOD, WEARS WELL, PRICED RIGHT!

PIC STEEL UNIONS *for Original Equipment*

For 150# service Pics are ideal! 100% zinc plated . . . smart looking . . . sturdy. Ends can take heaviest wrenching because they're constructed of steel pipe coupling stock . . . and their uniform flat sides permit speedier installing with open end wrenches. Special wedge-type bronze seat assures tight, safe closure. The zinc plating even includes the threads for top rust protection. The price? Less than a galvanized — no more than a black malleable union!

Write for FREE Samples

DART UNION COMPANY

130 Thurbers Avenue, Providence 5, R. I.

For more details circle NED-4211 on enclosed inquiry slip

NEW MACHINE LEVELING DEVICE

Empco JACK STYLE JS

Locates on anchor bolt.

Self-aligns to uneven floor.

Easily lifts 8,000 lbs.

Simply turn adjusting nut to raise or lower machine.

VI-SORB mounting pads absorb vibration.

Where anchor bolts are used, this new Empco Jack Style JS will save considerable time in setting and keeping equipment level.

Tested to support 20 tons and lift 8,000 lbs., this Empco Jack is the answer to any machine installations. Anchor bolt hole through the jack assembly allows clearance for ¾" diameter bolt. This permits the Empco Style JS Jack to be used at the *precise spot* where equipment was designed to be best supported.

Available in three sizes: 1¾", 2", and 3" (minimum heights) with VI-SORB mounting pads as optional equipment.

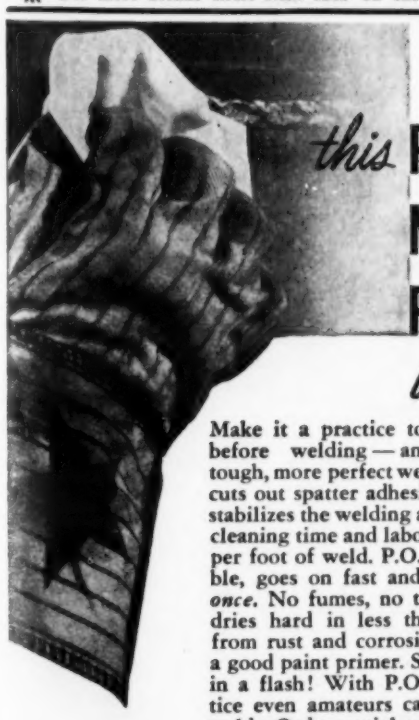
Write for specifications and prices of the complete line of Empco Leveling Jacks today.

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION

2727 JEROME AVENUE • DETROIT 12, MICHIGAN

For more details circle NED-4212 on enclosed inquiry slip



this PRACTICE MAKES *for* PERFECT *welds*

Make it a practice to use Protect-O-Metal before welding — and get easy-to-clean, tough, more perfect welds everytime! P.O.M. cuts out spatter adhesion, improves fluxing, stabilizes the welding arc, saves 85% of weld cleaning time and labor—all for about 1/10¢ per foot of weld. P.O.M. No. 2, water soluble, goes on fast and welding can start *at once.* No fumes, no trouble. P.O.M. No. 8 dries hard in less than an hour, protects from rust and corrosion for months, and is a good paint primer. Spatter wipes off either in a flash! With P.O.M. and a little practice even amateurs can make more perfect welds. Order a trial gallon today.

PROTECT-O-METAL

POM

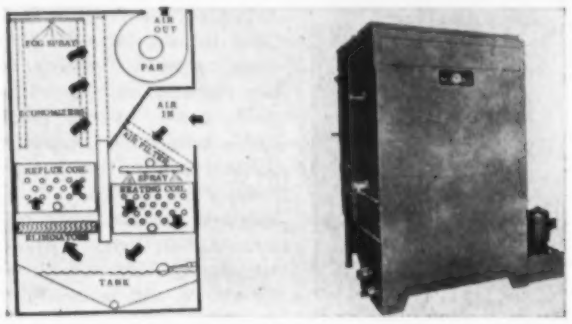
G.W.SMITH

G. W. SMITH & SONS, INC., 5406 Kemp Road, Dayton, O.

For more details circle NED-4213 on enclosed inquiry slip

DRYING AGENT CONCENTRATOR continuously removes moisture from liquid drying agent

By continuously removing moisture from the Hygrol liquid drying agent used in the controlled humidity method of air conditioning, this improved concentrator assures

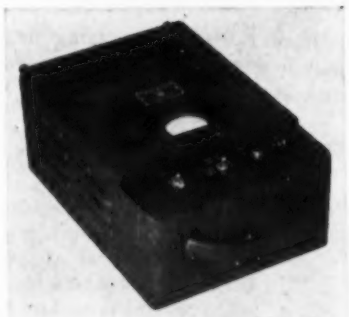


operation of the system at full capacity. Agent absorbs moisture from air directly, thereby reducing humidity without refrigeration. As it is diluted by the moisture it absorbs, a part of the liquid is pumped to the concentrator where it is sprayed into an air stream over a heated surface which raises its temperature and evaporates the water. Eliminator plates remove the liquid drops from the air stream.

The second stage makes use of a cooled reflux coil to raise the relative humidity and condense the absorbent vapor. In the third stage the air stream passes through filtration cylinders containing a fog nozzle. Here the building up of very high humidity completes the absorbent liquid condensation and its droplets are caught by the filters while the moisture laden air passes through. Absorbent drains to a tank in the base, then returns to the air conditioning unit, completing the cycle. Made by **Niagara Blower Co.,** Dept. E. D., 405 Lexington Ave., New York 17, N. Y.

For more details circle NED-4214 on enclosed inquiry slip

HIGH GAIN PREAMPLIFIER extends range of instruments

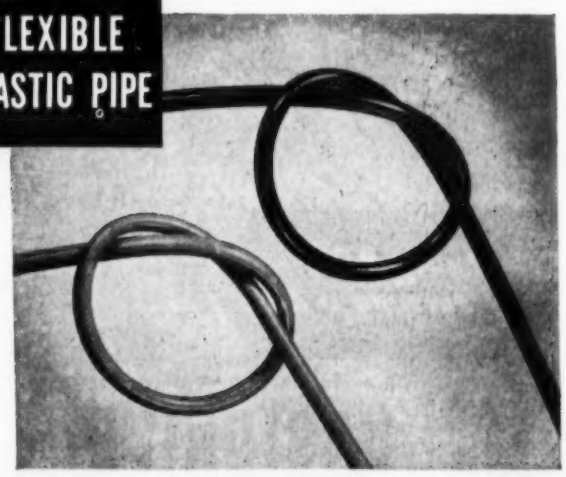


Designed to extend the measurable range of graphic recording instruments or cathode ray oscilloscope into the microvolt region and maintain relatively flat frequency response from 0.2 to 400 cycles per second, high gain alternating current preamplifier consists of three push-pull stages with balanced high impedance and condenser coupled output. Voltage gain is 200,000 times. When used with Brush direct writing oscillographs, gain is sufficient to give 1 mm of pen deflection per 2.5 microvolts input. Battery power source minimizes noise and hum interference. Dry B-battery is mounted in carrying case and external storage or dry batteries are used to furnish A-power. Control panel includes battery voltage meter, calibration pushbutton and gain control. Made by **Brush Development Co.,** Instrument Div. 36, 3405 Perkins Ave., Cleveland 14, O.

For more details circle NED-4215 on enclosed inquiry slip

JOHNSONITE FLEXIBLE PLASTIC PIPE

Here is the quality Plastic Pipe that can be tied in a knot, is 13 times lighter than ordinary pipe and is used everywhere. Corrosion-proof; acid-resistant; low-cost; excellent insulation material; lasts over 30 years; and easy to install.



Johnsonite has *proven* itself in the following applications and is being tried in new ones constantly:

Plating industry	Well installation	Chemical Processing
Cable covering	Irrigating golf courses	Beverage Processing
Industrial drainage	Municipal water systems	Electrical uses
Mines	Farms	Food Processing

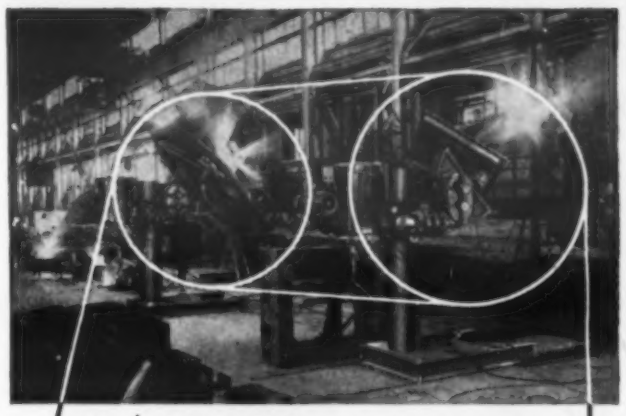
JOHNSONITE Rigid Plastic Pipe is also available for special applications.

WRITE FOR OUR CATALOG FOR FURTHER DETAILS

JOHNSON PLASTIC CORP.

P. O. BOX 268 • CHAGRIN FALLS, O.

For more details circle NED-4216 on enclosed inquiry slip



More WELDING going on here....

More welding and less time spent in flopping, propping up and crawling around weldments is the end result of the C-F Positioners in this welding department.

Mounted on C-F Welding Positioners, weldments can be quickly brought into position for a downhand pass — better, more uniform welds with resulting economies and production increases follow. Welders spend more time welding when they work with C-F Positioners because one "set-up" on the table allows them to maneuver the job without assistance, whether hand or power operated Positioners are used.

Power operated, variable speed C-F Positioners, with table rotation speeds in any range from 0 RPM and up, coupled with table tilt to 135° from the horizontal make them the logical choice for any production welding operation. Like all C-F Positioners, they have drilled tables for easy set-ups or tables can be quickly removed for installation of special fixtures or jigs. Write for Bulletin WP 26. CULLEN-FRIESTEDT CO., 1304 S. Kilbourn Ave., Chicago 23, Ill.

C-F

CULLEN-FRIESTEDT CO. CHICAGO 23, ILL.

positioned welds mean better, more economical welds

For more details circle NED-4217 on enclosed inquiry slip

keep costs down

with accurate job time records

CALCULAGRAPH

FIGURES ELAPSED TIME ACCURATELY

PRINTS DATE
STARTING TIME
FINISHING TIME
TOTAL ELAPSED TIME

Keep production costs in line with automatically computed, precision Calculagraph job time records. Just stamp card at beginning and ending of the operation. Calculagraph prints date, starting and finishing time plus precision calculated elapsed time. One Calculagraph can record and compute job time data for one entire shop or department by handling any number of cards in any sequence. Accurate, printed Calculagraph records can be filed for future use in estimating on new orders and checking production efficiency. Calculagraphs are low in cost, practically maintenance-free and built for a lifetime of dependable service.

COUPON BRINGS FULL INFORMATION — FILL IN AND MAIL TODAY!

CALCULAGRAPH COMPANY

SUSSEX STREET, HARRISON, NEW JERSEY

Send complete data on Calculagraph to:

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ STATE _____

For more details circle NED-4218 on enclosed inquiry slip

For Dependable, High-Pressure Connections

High-pressure connections are the best electrical connections. They are also the best mechanical connections because tests show that they have better ability to stay tight—are trouble-free once installed.

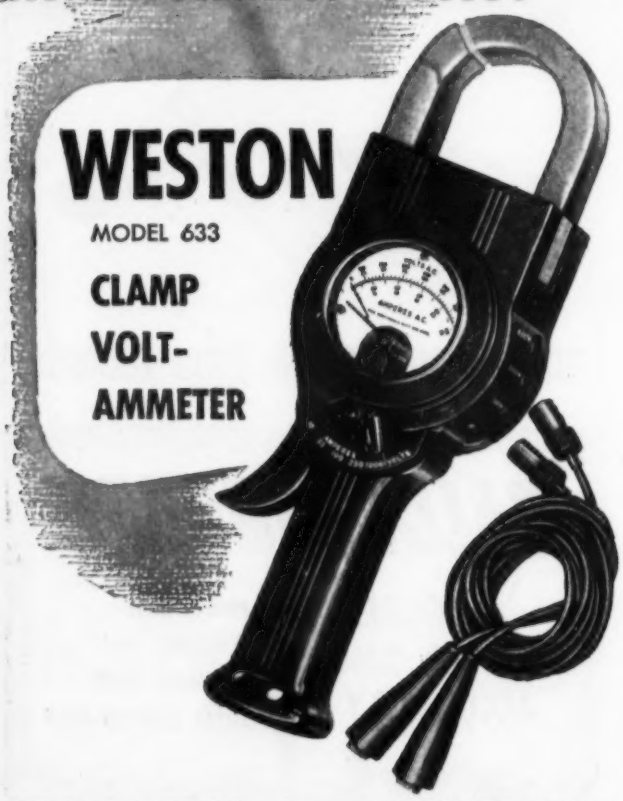
All connectors in the famous BLACKBURN Hi-Strength Line produce high pressure connections. Also, they are priced right to give you low cost connections that you can depend upon . . . Be sure to specify BLACKBURN!

SEND FOR CATALOG

JASPER BLACKBURN CORPORATION
35 Madison St. • St. Louis 6, Mo. • CEntral 3007

For more details circle NED-4219 on enclosed inquiry slip

It puts the Squeeze on Maintenance Costs!



A-C Current—five full scale ranges of 1000/250/100/25/10 amperes, with range overlap for good readability. Measurements under 10 amperes readily obtained.

A-C Voltage—three self-contained ranges of 700/350/175 volts insure accurate readability, in upper half of scale. Instrument insulated for 750 volt service.

Isolated Voltage and Current—with circuits insulated from each other, instrument can be connected to both voltage and current sources at same time.

Convenient 6 position switch—easily operated with gloved hand, a flick of the thumb selects any current range, or the Volts position.

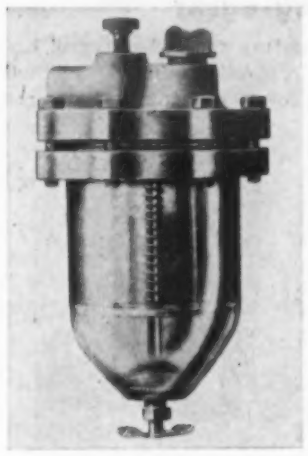
Adjustable pointer stop—red stop facilitates measuring starting current of motors.

Here's the instrument that produces big savings by slicing hours off maintenance schedules . . . produces worth-while revenue by forestalling costly repairs and shutdowns. Built to WESTON standards of safety, accuracy and dependability. Also available for A-C Ampere measurement only. Order through your local representative, or write . . . WESTON Electrical Instrument Corporation, 617 Frelinghuysen Ave., Newark 5, N. J. . . . *manufacturers of Weston and Tagliabue instruments.*

WESTON Instruments
9566
. . . TO INDICATE—RECORD—CONTROL

For more details circle NED-4220 on enclosed inquiry slip

AUTOMATIC AIR OILER
lubricates pneumatic tools



Premixed mist of oil and air is fed to any pneumatic tool or machine at each operating cycle by BR automatic air oiler. Unit is adaptable to any air flow from 0 to 500 cfm, its design eliminating clogging and flooding. Air line installation is in vertical position as close to the unit to be lubricated as possible. It receives air from the compressor and bubbles it through the oil in its reservoir. Air is then returned to air supply line and to tool. Height of unit is 5½ in. and diameter is 4 in. Visual plastic reservoir holds ¾-pint recommended SAE 10 oil. Available from **Robinson & Lee,** Dept. NED, 347 Madison Ave., New York 17, N. Y.

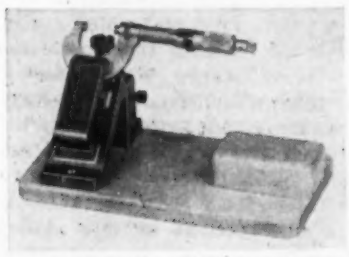
For more details circle NED-4221 on enclosed inquiry slip

PORTABLE HEATER
has improved heat dissipation

Improved grill design with louvers pitched to spread fan-forced heat out into room at floor level is one feature of redesigned portable electric heater. Unit is now finished in silver gray hammerstone, has rubber feet, chrome nameplate, Bakelite carrying handle and 6-ft heavy duty cord and plug. Retained safety features include cast-aluminum heating element and power cut-off safety switch. Two-way usefulness of fan for circulating heat in winter and cool air in summer has also been retained. Made by **Electromode Corp.,** 54 Crouch St., Rochester 3, N. Y.

For more details circle NED-4222 on enclosed inquiry slip

MICROMETER STAND
firmly holds 1 or 2-in. sizes



Inspection of parts by 1 or 2-in. micrometer is facilitated by the Ovaid micrometer stand. It holds the micrometer firmly while the piece to be inspected is supported on an adjustable table. A raised platform on the base supports the hand while the micrometer spindle is manipulated. Made by **O-Vee Gauge Co.,** Dept. NED, 2516 W. Vernon Ave., Los Angeles 8, Calif.

For more details circle NED-4223 on enclosed inquiry slip

CURE RPM HEADACHES

Get any RPM by turning a dial

U.S. VARIDRIVE MOTOR

2 to 10,000 RPM

WHEN designing a machine, avoid "rpm headaches" of fixed speed selection. Install a U. S. Varidrive Motor so that your machine can be operated at any and all speeds. *Eliminate guesswork.* Your machine speed can be instantly matched to each specific job or condition by turning a convenient control dial on the Varidrive. Increase performance by adopting the most modern of all drives—*Varidrive.*

Ask for new U.S. Varidrive Bulletin.

U.S. MOTORS

U.S. ELECTRICAL MOTORS Inc.
Box 2058, Los Angeles 54, Calif., or Milford, Conn.

For more details circle NED-4224 on enclosed inquiry slip

Here's Magnetic Protection Against Tramp Iron At LOWEST POSSIBLE COST!

Chocolate going over Perma-Plate at rate of 10,000 lbs. hr. Magnet picks up various forms of iron filings.

Dings Perma-Plate Magnet

NON-ELECTRIC • PERMANENT • LIGHTWEIGHT

ABOLISH tramp iron threats to your machinery. Gain constant, permanent protection at low cost. The Dings Perma-Plate requires no electricity—no electrical accessories—no maintenance.

Easily installed in chutes, ducts, trays, spouts, over conveyor belts, etc., the powerful Perma-Plate gives you *maximum* tramp iron removal—gives you CERTIFIED magnetic strength, GUARANTEED magnetic permanence. Learn the details—SEND for BULLETIN.

DINGS MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee, Wis.
All Types of Electric and Non-Electric Magnetic Separators for Every Purpose.

Dings Certified MAGNETIC STRENGTH

For more details circle NED-4225 on enclosed inquiry slip

METZGAR GRAVITY WHEEL & ROLLER CONVEYORS

GRAVITY POWER Costs Nothing

Saves up to 70% time in loading, unloading, warehouse handling and production line flow of work at no cost for power. Portable or permanent installation. Lubricated for life. Ball Bearing throughout.

Standard 11½"; 15"; 18" widths . . . 5'; 10' lengths. Curves 5'; 8'; 12', or to order. Strong ribbed rails.
Ask for Folder No. 1251

METZGAR CO.
MFGRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES • REEL DOLLIES & END-WOOD WHEELS.
METZGAR CONVEYORS
416 Douglas N.W.
GRAND RAPIDS 4, MICH.

For more details circle NED-4226 on enclosed inquiry slip

For Quick, Permanent Roofing
on any type of structure

TRUSCON FERROBORD® STEEL ROOFDECK

This strong, lightweight, steel roofdeck can be applied to any flat, pitched or curved roof structure. Large areas can be covered quickly. The members are so designed and formed that each unit firmly interlocks with the adjoining unit along the full length, achieving the maximum in lateral distribution of concentrated loadings. The members are fabricated in units long enough to span over three or more purlin spacings.

Ferrobord is manufactured from both 20-gage and 18-gage copper-bearing strip steel. Each unit is 6 inches wide and has a depth of either 1½" or 1¾". WRITE FOR FREE BOOKLET!

TRUSCON MARK OF MERIT PRODUCTS

TRUSCON STEEL COMPANY
1096 Albert Street, Youngstown 1, Ohio
Subsidiary of Republic Steel Corporation

For more details circle NED-4227 on enclosed inquiry slip

Tiny parts for the DC-6 get THOROUGH check-up with FLASH-O-LENS

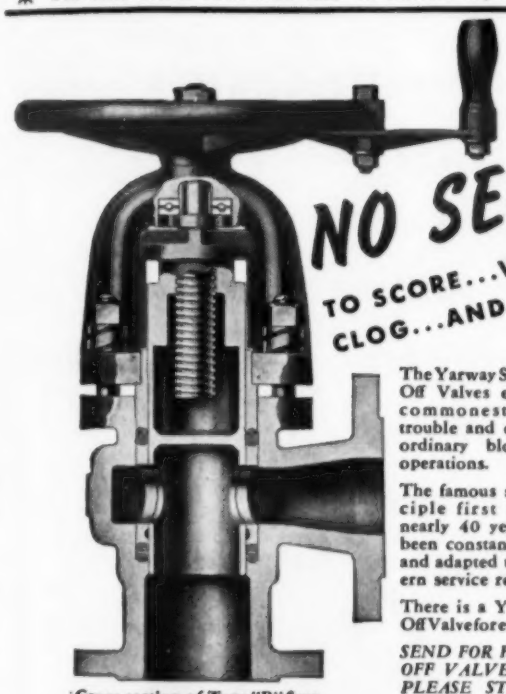
Small parts for the hydraulic system of the famous Douglas DC-6 are inspected for symmetry with FLASH-O-LENS — the handy device that *lights* the work and *magnifies* it.

It will pay *you* to put FLASH-O-LENS to work on your inspection jobs. Built-in bulb throws light *only* on field of vision — *not* in worker's eyes. Accurately ground lens gives sharply detailed enlargement.

Write for free descriptive literature on battery-operated and plug-in types.

E. W. PIKE & COMPANY
492 NORTH AVE. ELIZABETH, N. J.

▲ For more details circle NED-4228 on enclosed inquiry slip ▲



NO SEAT!

TO SCORE... WEAR... CLOG... AND LEAK

The Yarway Seatless Blow-Off Valves eliminate the commonest source of trouble and expense with ordinary blow-off valve operations.

The famous seatless principle first introduced nearly 40 years ago, has been constantly improved and adapted to meet modern service requirements.

There is a Yarway Blow-Off Valve for every pressure.

SEND FOR FREE BLOW-OFF VALVE BOOKLET. PLEASE STATE YOUR BOILER PRESSURES.

Cross section of Type "B" Seatless Angle Valve, Flanged.

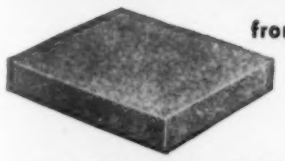
YARNALL-WARING COMPANY
131 Mermaid Ave., Phila.18, Pa.

YARWAY BLOW-OFF VALVES

▲ For more details circle NED-4229 on enclosed inquiry slip ▲

Armstrong's

VIBRACORK CUSHIONS VIBRATION



from Hydraulic Presses, Pumps, Compressors, and many other types of Machinery and Equipment

... ACTUALLY FLOATS THE LOAD ON MILLIONS OF AIR CELLS!

Vibracork is a resilient machinery isolation cork plate made of pure cork granules, compressed and baked under pressure.

Convenient to stock — Standard sheets, 12" x 36"; Standard density 2" and 3" thick; Heavy density, 1", 2" and 3" thick.

Easy to use — Can be cut to size on the job with an ordinary hand saw.

Loading range — Standard density, 1500# to 4000# per. sq. ft.; Heavy density, 5700# to 8500# per. sq. ft.

Availability — Immediate delivery. Korfund is sole distributor for the United States.

For installation data and further information, ask for Bulletin VC-500.

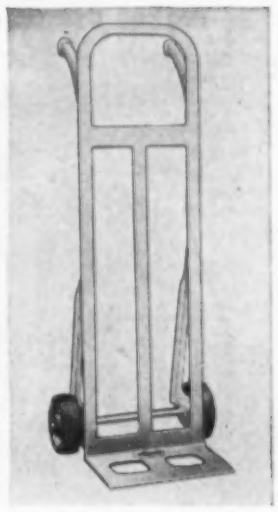
THE KORFUND CO., INC.

KORFUND VIBRATION CONTROL — SPRINGS — RUBBER — CORK

48-35P Thirty Second Place • Long Island City 1, N. Y.

▲ For more details circle NED-4230 on enclosed inquiry slip ▲

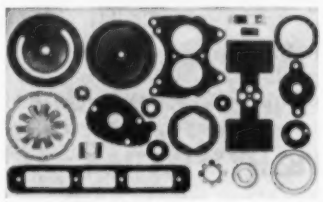
LIGHTWEIGHT HAND TRUCK weighs 15½ lb



Web frame construction of this cast magnesium hand truck makes it capable of moving 600-lb loads without stress or strain. The 15½-lb truck has ball bearing wheels with solid rubber or zero-pressure tires, pistol grip handles, cast-on stair climbers, optional wheel guards, choice of 44 or 48-in. heights and beveled wedge nose plate. Also optional are 6 and 8-in. wheels. Three types are offered: one-handle; two-handle; and barrel-type with two handles. Made by **Penco Engineering Co.**, Dept. TR, 25 California St., San Francisco 11, Calif.

▲ For more details circle NED-4231 on enclosed inquiry slip ▲

GASKETS & PACKINGS made of various materials



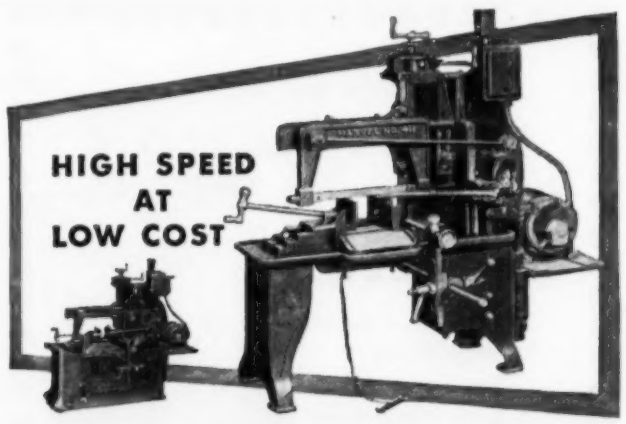
Teflon, Kel-F, Neoprene, silicone rubber, phenolics and other plastics are being used by this company, in the manufacture of gaskets and packings for improved service under a variety of conditions. Among other products made of these materials are washers, spacers, seals, shims and bushings. Made by **Auburn Mfg. Co.**, 312 Stack St., Middletown, Conn.

▲ For more details circle NED-4232 on enclosed inquiry slip ▲

VOLT-OHM-MILLIAMMETER portable unit is battery powered

Model 601 portable vacuum tube volt-ohm-milliammeter is battery-powered test instrument for measuring wide range of alternating and direct current voltages, resistances and currents. It has six direct current voltage ranges from 3 to 1,200 v full scale, 13 megohm input impedance; five alternating current voltage ranges from 3 to 300 v full range, six megohm input impedance; six ohm ranges from 1 to 100 megohms; and six current ranges from 3 to 1200 milliamperes. It measures ungrounded or symmetrical circuits, and either positive or negative direct current voltages without switching leads. A signal-tracing test probe measures dynamic-voltages in signal carrying circuits without interference to circuit action. Battery life is approximately 100 hours. Made by **American Chronoscope Corp.**, 316 W. First St., Mt. Vernon, N. Y.

▲ For more details circle NED-4233 on enclosed inquiry slip ▲



For tool room, stockroom, or maintenance shop, this 6" x 6" capacity hack saw is ideal when you want speed, accuracy, and economical operation at lowest possible investment.

Embodies similar design principles and features of MARVEL heavier duty production saws. Its shaper-link action that provides quick return stroke, and its heavy pressure screw feed are two exclusive MARVEL features that provide FASTER cutting than can be obtained with any other metal saw in its price class.

Single speed, 2-speed, and 4-speed models are available, to suit all types of applications where materials of different hardness and alloy characteristics are to be cut. Cabinet base or open-leg base are optional.

MARVEL *Metal Cutting* **SAWS**
Better Machines—Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

▲ For more details circle NED-4234 on enclosed inquiry slip ▲

Mystik Tapes
...for Industry, for Defense

The toughest, tightest gripping all-around cloth tape ever made. MYSTIK Tape No. 5800C handles protective problems under every condition—water, salt spray, abrasion. Does numerous holding, sealing, identifying jobs. Made to conform with government spec. JAN-P-127, Type I, Grade B.

WRITE for full information and free sample roll to Mystik Adhesive Products, 2657 N. Kildare, Chicago 39, Illinois

▲ For more details circle NED-4235 on enclosed inquiry slip ▲

Assemble and Inspect under Magnification

in one operation

This starter switch for a refrigerator motor presents a tough assembly and inspection problem. The springs must be accurately bent and adjusted by hand—tolerances are close. With the Kodak Contour Projector, the whole operation—bending and checking—may be done at the same time and under high magnification.

Since the Kodak Contour Projector has provisions for surface illumination from the same lens that picks up the image, every detail of the switch is shown on the screen. A 45° mirror permits the part to be mounted flat for easy accessibility. Both to adjust the part and check tolerances, the operator simply compares the magnified image with a chart-gage laid on the bright screen.

For rapid, routine inspection and adjustment work, the economical, stripped-down Kodak Contour Projector, Model 3, will meet your requirements. For toolroom measurement, the versatile Model 2A is what you need. In your area there is an experienced field engineer who will be glad to discuss your own particular problems. You can get in touch with him by writing Eastman Kodak Company, Industrial Optical Sales Division, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

If you want to check precision spur and helical gears in action, write for information about Kodak Conju-Gage Instrumentation.

Kodak

▲ For more details circle NED-4236 on enclosed inquiry slip ▲

FAST

KESTER FLUX-CORE SOLDER

FAST **In Obtaining Wanted Results**

Only Kester has the proven ability to give you the exact percentage of flux content needed for your particular soldering operations.

Free Technical Manual: **Send for your copy of "SOLDER and Soldering Technique" today.**

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, New Jersey • Brantford, Canada

KESTER SOLDER

▲ For more details circle **NED-4237** on enclosed inquiry slip ▲

EXIT THE SHOVEL...

ENTER THE *Hapman*

Sealed-pin Chain, Neoprene-flighted

TUBULAR CONVEYOR

for low-cost handling of bulk flowable materials—wet or dry

"Shovel labor" costs *plenty* — so do safety hazards and confusion caused by heavy aisle traffic. But there's a better way — the *Hapman Way!*

By handling innumerable bulk materials with Hapman Tubular Conveyors, you can slash these costs — and increase safety and efficiency! Can you handle metal chips from machine tools? *Yes!* Flour? *Yes!* Abrasive or corrosive chemicals? *Yes!*

Get details NOW — write Hapman, describing your problem. Ask for Bulletin ND-552.

HERE one Hapman Conveyor removes dry cast iron chips from the bases of two profile milling machines. Engineered for International Harvester's Truck Engine Plant, Indianapolis, it operates *without* transfer points in two planes, two directions! Many other conveyor layouts possible.

Hapman **CONVEYORS, INC.**
DIVISION HAPMAN-DUTTON COMPANY
KALAMAZOO MICHIGAN

▲ For more details circle **NED-4238** on enclosed inquiry slip ▲

GRINDER-SANDER-POLISHER makes use of abrasive belt

Small parts that must be ground, finished, polished and deburred by the off-hand method can be processed with this versatile grinding, finishing and polishing unit. Machine makes use of contact wheel method of coated abrasive belt polishing, but also features platen-supported belt grinding, concave and convex contour grinding and polishing and ¼ to ½-in. radius grinding and polishing. Internal grinding attachments process areas from ⅝ to 2 in. OD. Two models are made: UM-60, with 2½ x 60-in. belt and UM-45, with 4 x 60-in. belt (illustrated). Machine, mounted on a fabricated steel cabinet base, can be rotated 360 degrees, with automatic locking at every 90 degrees. In addition, it has three standard positions of operation: vertical (shown); horizontal; and perpendicular. Made by **George F. Grant Co.**, 28 Kempton Pl., West Newton 65, Mass.

▲ For more details circle **NED-4239** on enclosed inquiry slip ▲

EXPLOSIONPROOF LIGHT FIXTURE even heat distribution provided in sizes ranging from 60 to 500 w

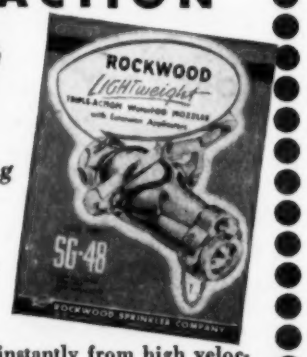
Approved by Underwriter's Laboratories for Class 1 Groups C and D hazardous locations, AA-51 series explosionproof lighting fixture is available in sizes ranging from 60 to 500 w. Entire lower edge of hood is used as a continuous louvre for full circle venting. This feature, combined with porous metal interiors, provides even heat distribution and cooler operation. Wire-free canopy construction in fixture allows instant removal of entire unit. To safely confine arcs in case current is on when fixture is removed, five full threads on canopy are engaged whenever contact is made or broken. Canopies are standardized to take any fixture in AA-51 line without rewiring.

Illustrated features include: (1) standardized canopy, (2) connection block with springleaf contacts; (3) release lug for easy fixture removal; (4) shock-absorbing socket; (5) porous metal interiors; (6) notches for screw driver leverage in releasing globe ring; (7) heat and impact-resisting glass globe; (8) detachable reflector. Made by **Appleton Electric Co.**, 1758 Wellington Ave., Chicago 13, Ill.

▲ For more details circle **NED-4240** on enclosed inquiry slip ▲

Avoid large fire losses with

TRIPLE-ACTION WaterFOG NOZZLE



Get the amazing facts today! Send for this free booklet — no obligation

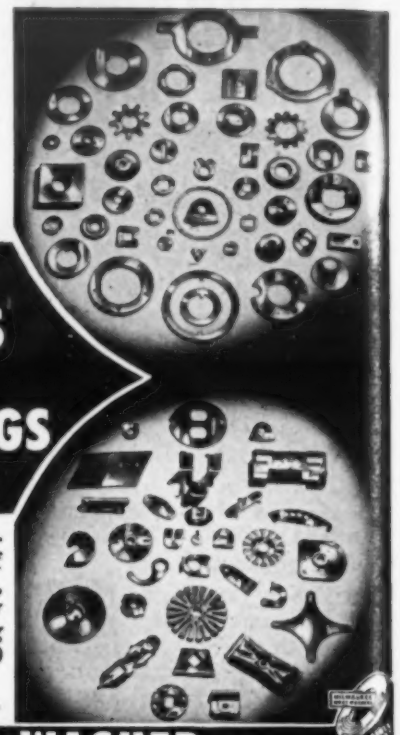
Triple action! Change instantly from high velocity WaterFOG to straight stream to low velocity WaterFOG. Even untrained, unskilled men can easily use Rockwood's new lightweight SG-48 nozzle. Extinguishes and controls fires in both ordinary combustible and flammable liquids *faster — and with less water, less damage.* Operates at 50 psi at the nozzle. Write for Bulletin C-501R. Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY
44 HARLOW ST., WORCESTER 5, MASS.

▲ For more details circle **NED-4241** on enclosed inquiry slip ▲

Serving **INDUSTRY**

SINCE 1887



WASHERS and STAMPINGS

Standard and Special Washers, of every description, any material, any finish, utilizing more than 22,000 Sets of Dies.

Let us Quote on Your Needs.

WROUGHT WASHER MFG. CO.
THE WORLD'S LARGEST PRODUCER OF WASHERS
2256 SOUTH BAY STREET • MILWAUKEE 7, WISCONSIN

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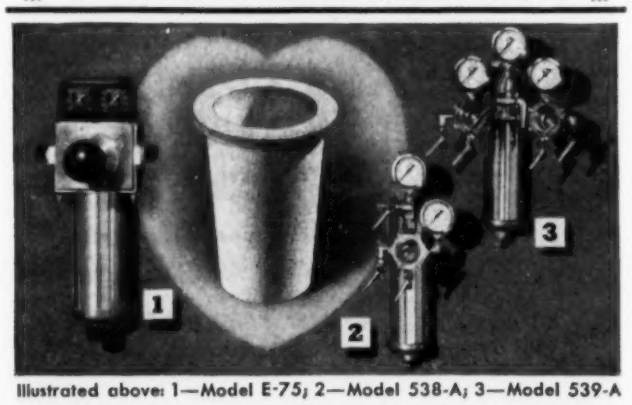
BROWNHOIST BETTER
- ***BUY DIRECT FACTORY***
- ***ROPE REEVE, LINK TYPE***
- ***WRITE FOR CATALOG***

BUILDS BUCKETS FROM FOR LESS POWER WHEEL

INDUSTRIAL BROWNHOIST CORP.
BAY CITY, MICHIGAN

156

▲ For more details circle **NED-4243** on enclosed inquiry slip ▲



Illustrated above: 1—Model E-75; 2—Model 538-A; 3—Model 539-A

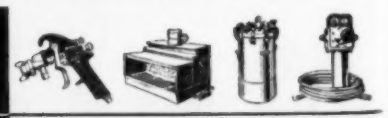
BINKS OIL & WATER EXTRACTORS

a heart of metal for better spray finishes

The filter is literally the "heart" of an oil and water extractor. These Binks extractors have a unique *all metal* filter that traps oil, water and all other foreign particles larger than 1/1000 of an inch. Result: only clean, dry air reaches your spray gun...you prevent rejects due to finishing blemishes.

Send for Catalog-Data Book No. 955
It's a handy guide for selecting Binks extractors and other equipment.
Write: Binks Manufacturing Co.,
3122-34 West Carroll Ave., Chicago 12, Ill.

Binks
EVERYTHING FOR SPRAY PAINTING



GUNS • SPRAY BOOTHS • MATERIAL TANKS • EXTRACTORS & ACCESSORIES
REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

▲ For more details circle **NED-4244** on enclosed inquiry slip ▲

Oxweld

PORTABLE FLAME-CUTTING MACHINES FILL A VARIETY OF SHOP REQUIREMENTS

This Oxweld CM-16 is designed for oxy-acetylene flame-cutting of steel plate up to 4 inches thick. It travels directly on the work and cuts circles automatically—hand-guided, it cuts irregular shapes. Operated on track this machine cuts straight lines. Adaptors are available for straight-line cutting on thick steel or for beveling. The CM-16 weighs only 45 pounds and is low in price. Write for catalog, Form 4487.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

For more details circle **NED-4245** on enclosed inquiry slip

Preferred by diemakers everywhere, but widely used for linkage, trunnion mountings, shafts and numerous other applications throughout industry. Shoulders are held to close tolerances, threads and head are concentric with the body, screws are threaded close to the shoulder. Write for descriptive literature. STANDARD PRESSED STEEL Co., Jenkintown 24, Pennsylvania.

SPS recommends *Standards*—¼" to ¾" available from your local UNBRAKO distributor's stock.

UNBRAKO SOCKET SCREW DIVISION **SPS** JENKINTOWN PENNSYLVANIA

For more details circle **NED-4246** on enclosed inquiry slip

DON'T LOSE VALUABLE DUST!

Buell's wide experience in the recovery of Valuable Dust can help you boost your plant's efficiency now—when peak efficiency is really needed!

To learn how a Valuable Dust Recovery System can be designed to suit your plant's special requirements, write today for full information on the *3 basic systems* of efficient dust recovery and dust collection. Ask for the new, illustrated Buell 'Dust Recovery' bulletin. Buell Engineering Co., Dept. 23-E, 70 Pine Street, New York 5, New York.

buell

Engineered Efficiency in Dust Collection

For more details circle **NED-4247** on enclosed inquiry slip

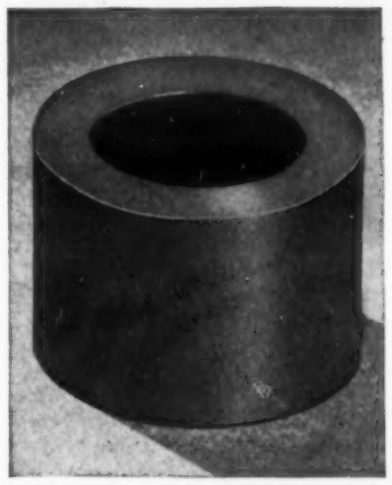
PIPE & BOLT THREADERS
forward-reverse motor develops power sufficient for 12-in. pipe

All tools in the model 500 pipe and bolt threading machine thread, cut and ream independently and up close to the chuck, then swing up out of the way when not in use. The thread oil system is concealed and thread and length gage has large easy-to-read numerals. The chuck has six adjusting pinions. Self-contained Quadritype die head is adjustable for threading 1 to 2-in. pipe, including over and undersize, regardless of position of quick-opening lever and without removing dies or die head from machine.

Improved Dualtype die heads, one for ¼ and ⅜-in. and one for ½ and ¾-in., have same instant size change on the machine. Monotype die heads for ⅛ to 2 in. and bolt die heads for ¼ to 2 in. are available. Both adjust to over and undersize in the machine. The forward-reverse 115-v, 25 to 60-cycle, single phase ac or dc motor supplies ample power for threading pipe to 12-in. diameter when geared tools are used. Bench and stand models are offered, latter being open or closed, with or without wheels. Made by **Ridge Tool Co.,** 125 Ridge Rd., Elyria, O.

For more details circle **NED-4248** on enclosed inquiry slip

SELF-LUBRICATED BEARINGS, PARTS are carbon or graphite impregnated



Used mainly for bearing, bushings and wearing parts where oil or other lubrication is undesirable, material called Carbolube is made of carbon or graphite impregnated with babbitt, copper cadmium or silver. Parts have self - lubrication quality as an inherent property in the carbon or graphite. Typical installations are in air compressors, textile and printing machinery, marine equipment, fluid meters, machinery where high and low temperatures are encountered, chemical and food equipment, pumps and aircraft parts. Material can also be used for electrical contacts to prevent pitting and fusing, or as brushes for electrical machines. It is made by vacuum-pressure process in up to 10-in. diameter sizes and almost any form or shape by **Carbone Corp.,** 412 Myrtle Ave., Boonton, N. J.

For more details circle **NED-4249** on enclosed inquiry slip

ONLY DIMENSIONAIR Gives You ALL This-

FULL 7½" SCALE OF CALIBRATED ACCURACY — *All of it* measures accurately. Not just part of it!

LONGER APPROACH RANGE to measure earlier BEFORE reaching minimum work size. Total minus range .0015".

GREATER CLEARANCE (.0018" up to .0038") so you can check Undersize, Taper, Out-of-Round and Irregular Shape Holes.

STAY-PUT ZERO — DON'T WORRY ABOUT PRESSURE FLUCTUATIONS.

10 SECOND SET-UP — JUST ONE ADJUSTMENT.

ONE MASTER ONLY — FORGET THE IDEA TWO ARE NEEDED.

INTERCHANGEABLE PLUGS — WITHOUT MAJOR ADJUSTMENT.

MORE SENSITIVE TO SIZE VARIATIONS — fully Jeweled Cushioned Movement.

LONGER PLUG WEAR saves you real money.

Try the Federal Dimensionair yourself — compare it with any other air gage. Write today for complete information and prices. FEDERAL PRODUCTS CORPORATION, 1175 Eddy St., Providence 1, Rhode Island.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively.

For more details circle **NED-4250** on enclosed inquiry slip

REMOVE IRON and STEEL PARTICLES from COOLANTS and CUTTING OILS with the

FRANTZ FERROFILTER®

Install these permanent magnet separators for longer tool life . . . finer finishes . . . protection of all surfaces subject to wear . . . more production.

Send for BULLETIN 56

S. G. Frantz Co., Inc.
P. O. Box 1138 Trenton 6, N. J.
Manufacturers of Permanent Magnet and Electromagnetic Separators

For more details circle **NED-4251** on enclosed inquiry slip

Hanna Cylinders

. . . SMOOTH, DEPENDABLE POWER for 1001 APPLICATIONS

Pneumatic and Hydraulic . . .

There are standard model Hanna Cylinders for many ideal applications in *your plant* and in the machines and equipment *you* design and build. You'll find that they simplify and improve practically all types of machine control and actuation by eliminating a vast assortment of miscellaneous cams, cranks, screws, levers, etc. Hanna Cylinders operate efficiently and economically to provide the push, pull or lift movements required for the operation.

. . . High and Low Pressure

Hanna Cylinders are available in a selection of sizes, types and mounting styles to meet your exacting requirements. They are designed for operation by air, oil or water and for pressures up to 1500 psi.

There are thousands of Hanna Cylinders now at work throughout industry providing smooth, economical, dependable power for hundreds of applications. It will pay you to find out how Hanna Cylinders can help improve production and machine operation in your plant.

SEND FOR CATALOGS

Hanna Catalog No. 236 gives full information on Low Pressure Cylinders. Hanna HP Hydraulic Cylinders are shown in Catalog No. 233A.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS
1759 Elston Avenue, Chicago 22, Illinois

For more details circle **NED-4252** on enclosed inquiry slip

Select pressure—get uniform, constant, hydraulic control

"FULFLO" TRADE MARK REG. U.S. PAT. OFF.

OIL BY-PASS RELIEF VALVES

Standard or Flange Types

NEED NO MAINTENANCE

Precision-engineered to maintain predetermined pressures on ram presses, machine tool hydraulic mechanisms, Diesels and oil-burning equipment.

Trouble-free because built with fewest parts for dependable, quiet, constant performance.

NON-CHATTERING

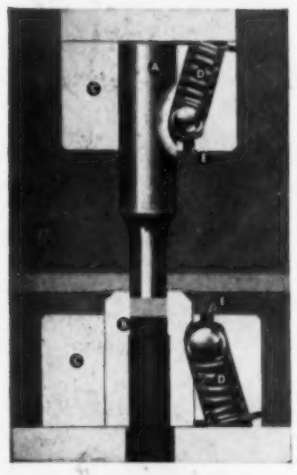
BRASS OR CAST IRON . . . for pressures from 0 to 500#. Pipe sizes: ¼" to 2"

TODAY write for personal copy on letterhead FULFLO MECHANICAL DATA BOOK

FULFLO THE FULFLO SPECIALTIES CO. Inc. BLANCHESTER, OHIO

For more details circle NED-4253 on enclosed inquiry slip

You Save Time with R-B PUNCHES and DIES



How They Work

R-B punches (A) and die buttons (B) are locked in standard or special retainers (C) which are mounted on the die shoes. A spring-loaded ball lock (D) produces positive radial alignment and vertical locking; *no additional keying is necessary regardless of the size or shape of the punch.* Up to ¾" stock can be pierced. R-B punches and dies are easy to insert; push and twist and they're locked. They're easily removed, too. Retainer holes (E) provide for insertion of tanged tool which releases ball and allows instant removal.

How They Save Time

IN DIE DESIGNING

R-B standardized retainers are available in three shapes and many sizes, and where necessary, R-B special retainers can be supplied. You save "time on the board" because you are working with *standardized* equipment.

IN DIE CONSTRUCTION

R-B punch and die retainers and special retainers are quickly, easily and accurately mounted without special machining. With them, you can save much of your skilled die-maker's time.

IN DIE OPERATION

HERE'S WHERE YOU *REALLY* SAVE. R-B punches and dies cut press down time for replacement to a minimum. They're instantly removed—quickly changed—yet accurately aligned when locked.

Get the Whole R-B Story

ALLIED PRODUCTS CORPORATION
RICHARD BROTHERS DIVISION
Dept. 63 • 12629 Burt Road • Detroit 23, Mich.

Please send me your 52-page free catalog.

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____

Also Produced in Allied's Four Plants . . .
HARDENED AND PRECISION GROUND PARTS • STANDARD CAP SCREWS • SPECIAL COLD FORGED PARTS • SHEET METAL DIES • ALLITE DIES CAST OF ZINC ALLOY • JIGS • FIXTURES

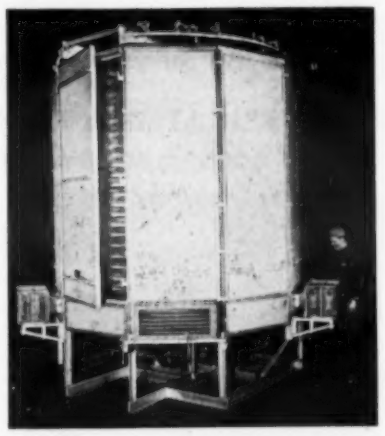
For more details circle NED-4254 on enclosed inquiry slip

MAGNETIC BRAKE for intermittent stop-start use

Only six major operating parts are included in the design of this magnetic brake which features a direct automatic set and release action between solenoid and armature. Of one-piece doughnut construction, it allows motor's output shaft to extend completely through the brake. Thus, both ends of motor shaft can be used for powering two pieces of equipment. Application can be to fluid coupled motors and gear reducers because of this feature. Installation is on output shaft of the fluid coupling with shaft extending through the brake for connection to load. Lining wear is automatically compensated for by spring tension, with brake torque remaining the same. Brake sets by spring action when current is cut off and releases magnetically when current is reapplied. A manual release-automatic reset permits rotating motor output shaft by hand if desired. Brakes are available in 3, 10 and 25 ft-lb continuous duty ratings and 15 and 35 ft-lb intermittent duty types. Mounting can be on Reuland motors or NEMA C-face type endbells. Made by **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

For more details circle NED-4255 on enclosed inquiry slip

EVAPORATIVE TYPE DRYERS extract 50-750 lb of water per hour

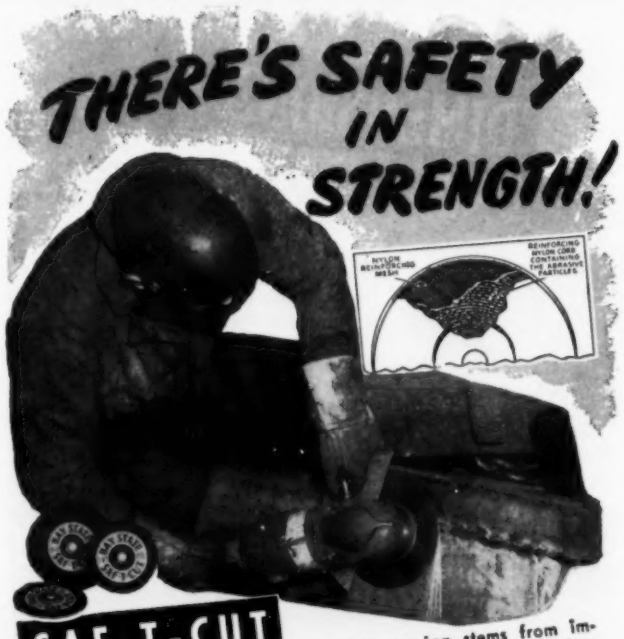


A housing diameter of 9 ft 6 in. and height proportional to number of shelves, varying from 7 ft 10 in. to 11 ft 9 in., indicate high evaporative capacities of N series continuous-transfer type vertical Turbo-Dryers. These packaged units handle fragile or heat sensitive materials ranging from thick slurries to fine powders, through repeated piling and spreading. They are furnished completely insulated and have variable speed drives for both rotating tray structure and turbo-fans. Evaporative capacities range from 50 lb of water per hour at 100° F for smallest unit to 750 lb per hour at 300° F for largest dryer. Total horsepower ranges from 1⅓ to 2 hp. Units can be elevated on steel support or set directly on floor. Made by **Wyssmont Co.**, 31-04Y Northern Blvd., Long Island City 1, N. Y.

For more details circle NED-4256 on enclosed inquiry slip

DO YOU KNOW? Dynakon A3A Fiberglas-plastic sheet material, previously available in four thicknesses up to ½-in., is now offered in fractional thicknesses from 1/16 to 1½-in. and in 18 x 28-in. sheets. Special sizes up to 2½ in. thick can be supplied on order. Made by Dynakon Corp., 5511 Hough Ave., Cleveland 3, O.

For more details circle NED-4257 on enclosed inquiry slip



SAF-T-CUT

SAF-T-CUT stamina stems from imbedding sharp-edged abrasive particles in tough, resilient nylon. Metal working men seeking a light-weight wheel for rugged stock removal, find it in Bay State's reinforced SAF-T-CUT Disc-wheel.

SPECIFY SAF-T-CUT FOR A SAFE, STRONG, ABRASIVE PRODUCT

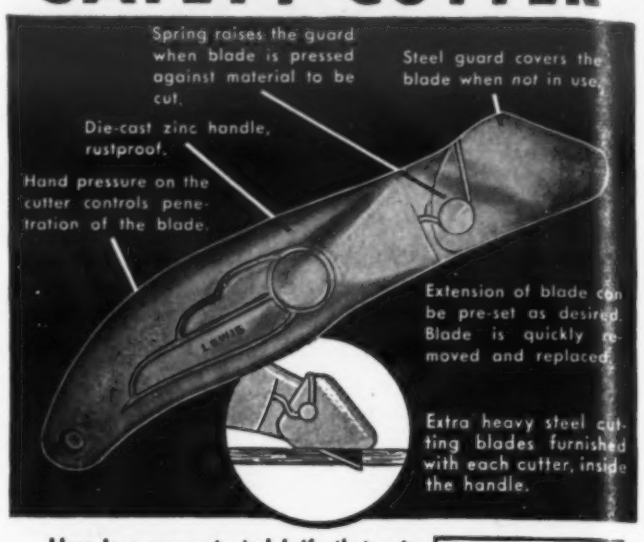
BAY STATE

Bay State Abrasive Products Co.
Westboro, Massachusetts
Branch Offices and Warehouses—Chicago, Cleveland, Detroit, Pittsburgh
Distributors—All Principal Cities
In Canada: Bay State Abrasive Products Co. (Canada) Ltd., Brantford, Ontario

Send for information-packed "Big Three" catalog.

For more details circle NED-4258 on enclosed inquiry slip

LEWIS Automatic SAFETY CUTTER



Here is a new patented knife that cuts swiftly, surely, safely . . . yet protects the user from injury. Always safe because the blade is guarded — always ready to use because there's nothing to adjust.

Retail Price **$1.50**

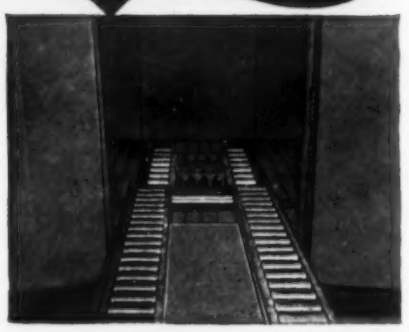
FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

For more details circle NED-4259 on enclosed inquiry slip

Cut Loading Time in HALF!

WITH **ISLAND PALLET DOLLIES**

Puts an end to the pallet handling problem.



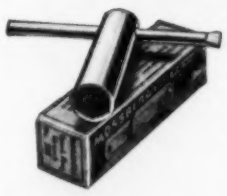
Fork trucks can't enter a reefer car! That's where the Pallet Dolly takes over. Staggered bottom rollers eliminate trouble from floor racks. Has 14 gauge rollers on 4" centers... 2 x 2 x ¼ angle frame... built to handle your pallet... all parts are standard equipment. Write for detailed bulletin RTD-1 A.

Dept. NE5

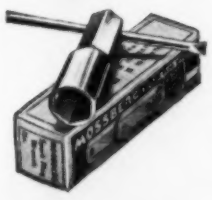
ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North
Long Island City 1, New York

For more details circle NED-4260 on enclosed inquiry slip

NOW! AN APCO WRENCH for every spark plug in use!



FOR hundreds of jobs in the automotive and aircraft industries . . . for every manufacturer and user of gasoline-powered equipment . . . for shop repairmen, mechanics and plant maintenance crews . . . for original equipment tool kits.



FOR your convenience, Apco Mossberg Spark Plug Wrenches are made in the two *most-wanted, most-used* styles; the round, single-end type in 4 quick-fit sizes and hexagonal, double-end style providing 4 wrenches, 8 ends. Every wrench in the complete Apco Line is especially designed and precision made . . .

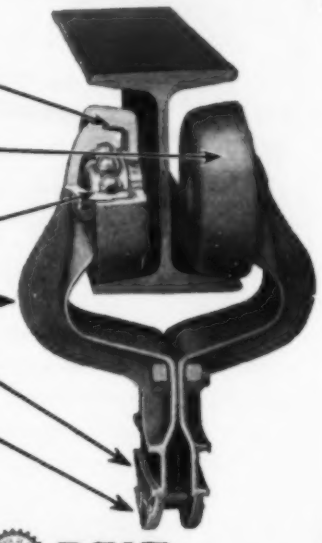
FOR easier handling . . . maximum durability . . . better on-the-job performance. Make quick work of *all* spark plug changes and adjustments . . . save time . . . save money!

Contact your distributor or write direct for complete information on these and other top quality Apco "Tools for Industry". Apco Mossberg Co., 161 Lamb Street, Attleboro, Mass., U. S. A.

APCO MOSSBERG CO.
LAMB STREET, ATTLEBORO, MASS.

For more details circle NED-4261 on enclosed inquiry slip

Important points to look for when you buy trolleys
You get them all when you buy Link-Belt



Effective sealing of wheel and bracket keeps out dust and dirt.

Wheels are drop-forged, internally machined to extremely close tolerances.

Raceways are induction hardened. High load capacity is based on entire assembly — not just on bearing.

Rugged, one-piece bracket and clevis are drop-forged and heat-treated—fewer parts to maintain.

Trolley can replace other makes without disturbing chain's operating position.

Clevis pins are locked in bracket, cannot rotate. Bracket wear is minimized.

Write for Folder 2241-B.

LINK-BELT

LINK-BELT COMPANY: Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. 12,384

For more details circle NED-4262 on enclosed inquiry slip

Speed Production...

With This Husky

Mall TORK-HAMMER

Model 2EW

And Its Terrific Rotary Impact!

Put more power into manpower with this speedy portable Impact Tool that handles any tightening or removing operation. Runs nuts and bolts up to ½-inch in size. Quick conversion for drilling, reaming, tapping, extracting broken capscrews or studs . . . Drives wood augers, wire brushes, sanders, etc. Ideal for close quarter work.

Mall Portable Electric Screwdriver
Speeds shop operations. Equipped with 2 finder-type bits, Allen hex wrench.

Model 143S

Send for Descriptive Bulletin No. 2422

40 Factory-Owned Warehouses, Coast To Coast To Serve Our Customers And Thousands of Dealers.

MALL TOOL COMPANY
7727 S. Chicago Ave. • Chicago 19, Illinois

For more details circle NED-4263 on enclosed inquiry slip

Quality Wire INSURES **QUALITY SPRINGS**

Whatever your spring wire requirements—consult with Seneca! Our production *geared to precision* in manufacturing oil tempered and hard drawn wire—round and flat—for all types of high grade mechanical springs. Seneca uniformity and dependability help the spring manufacturer produce high quality springs at low cost. Write . . . Seneca Wire & Mfg. Company, Fostoria, Ohio. Representatives in principal cities.

SENECA ROUND AND FLAT SPRING WIRE
WIRE & MFG. COMPANY • FOSTORIA, OHIO

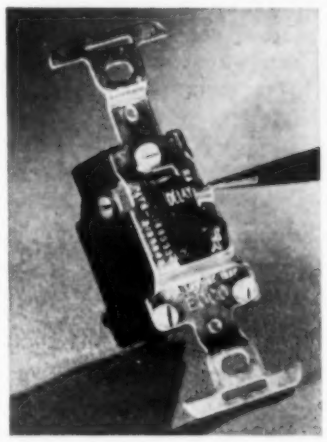
For more details circle NED-4264 on enclosed inquiry slip

CARBIDE COMMUTATOR SAW
also does slitting, slotting work

Hub type solid carbide saw is designed primarily for commutator undercutting but can be used to advantage for other slitting and slotting work. Design feature is brazed ring which forms part of the hub, and makes hub and solid carbide blade completely bonded and rigid for long tool life and less breakage. Diameters of these saws range up to 3 in. Made by **Gay-Lee Co.**, 73 W. Fourteen Mile Rd., Clawson, Mich.

For more details circle NED-4265 on enclosed inquiry slip

DELAYED-ACTION SWITCH
is flush toggle, single pole type



Delayed-action electric light switch keeps light on for full minute after flipping toggle downward from "on" to "delay" position. When toggle is flipped up, light is turned on immediately, as with conventional switch. Spring-loaded diaphragm in switch postpones extinguishing light to provide delaying action. Unit is housed in standard size case molded of durable Bakelite phenolic plastic to provide high insulating properties. It can be easily installed in existing wall outlet or new construction. Switch is flush toggle, single pole design and has capacity of 10 amp at 125 v, 5 amp at 250 v. It is Underwriters' Laboratories listed. Made by **Electric Deodorizer Corp.**, Dept. NED, 9993 Broadstreet, Detroit 4, Mich.

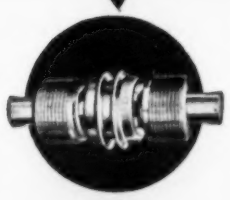
For more details circle NED-4266 on enclosed inquiry slip

SELF-LOCKING BAG HOLDER
grips for filling with bulk materials

Self-locking cam-grip bag holder is designed to suspend 50, 80 and 100-lb multiwall paper bags while they are being filled with various bulk commodities. Device consists of a bag-holding mechanism mounted on a spout which is bolted to a hopper or bin outlet. Empty bag is slipped over the mouth of the spout and up under the cams which hold it in place during filling. A semicircular bar is pushed to release a filled bag, allowing it to drop to a conveyor or skid. Made by **Richardson Scale Co.**, Van Houten Ave., Clifton, N. J.

For more details circle NED-4267 on enclosed inquiry slip

"Steel Squirrel" Helps



One Man Do Work of Two

The self-propelled Blackwelder "Steel Squirrel" saves 50 percent of pruning, picking and wiring labor costs — and powers compressed air tools. ROCKFORD Pullmore CLUTCHES help it raise and lower the operator, turn on a dime and travel from tree to tree. Let ROCKFORD clutch engineers help give *your* machines versatile power transmission control.

B-W ENGINEERING MAKES IT WORK
B-W PRODUCTION MAKES IT AVAILABLE

ENGINEERING BULLETIN SENT ON REQUEST

ROCKFORD CLUTCH DIVISION
312 Catherine Street, Rockford, Illinois, U. S. A.

ROCKFORD CLUTCHES

For more details circle NED-4268 on enclosed inquiry slip

MERCOID

FOR INDUSTRIAL APPLICATIONS REQUIRING POSITIVE CONTROL OF PRESSURE, TEMPERATURE, LIQUID LEVEL ETC.

CONTROLS PERFORM IMPORTANT RESPONSIBILITIES, AND SHOULD BE SELECTED WITH DISCRIMINATION

WRITE FOR CATALOG 700 -- PLEASE MENTION THIS PUBLICATION

THE MERCOID CORPORATION
4201 BELMONT AVE. CHICAGO 41, ILL.

For more details circle NED-4269 on enclosed inquiry slip

HOW TO SELECT THE *RIGHT* MOTOR AND CONTROL FOR YOUR JOB

Name your motor and control need . . . a-c or d-c, from 1 to 700 hp . . . this book has the answers! Gives requirements to consider before selection. Features comprehensive chart, teaming the right motor and control to the right job.

Introduces Westinghouse motor and control features—tells what they mean to you . . . shows modifications and accessories available and explains how they add life and versatility. It's a valuable selection guide with a storehouse of facts. Write for free booklet, Motor and Control Selector Guide, B-5458, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

J-21687

YOU CAN BE SURE... IF IT'S **Westinghouse**
MOTORS and CONTROLS

For more details circle NED-4270 on enclosed inquiry slip

SPO AIR VIBRATORS

BINS HOPPERS · CHUTES · CONVEYORS · PACKAGING TABLES · CONCRETE FORMS · BENCHES SCREENS · MOLDING MACHINES · MATCH PLATES · FATIGUE TESTING

Specify SPO dependable, low-cost air vibrators for all materials handling and foundry applications.

SPO vibrators feature full power starting, hammer-like blows, high-speed operation, long trouble-free service life.

Blow for blow, you can't beat SPO air vibrators! For information on complete line, write today for Bulletin 50.

529-SI

SPO INCORPORATED

6475 Grand Division Ave. • Cleveland 25, Ohio

For more details circle NED-4271 on enclosed inquiry slip

CONVEYORIZED HOPPER truck bed unit delivers bulk materials within 180 degree radius

Coal, foundry sand and other bulk materials can be handled efficiently by Univeyor conveyorized truck body hopper which is built with capacities ranging from 120 to 480 cu ft. Conveyors are available in optional lengths from 8 through 16 ft. Unit is powered by truck motor by direct shaft drive through transmissions which give the conveyor in the bottom of the body and the tandem conveyor a speed ratio of 1 to 6.

Rear transmission, which drives the tandem conveyor, allows operation of this delivery unit within 180-degree angle from the rear of the truck at an elevated or depressed angle. Although the truck body has rear discharge, it can be partitioned into as many as four separate sections, each selectively unloaded. Body is made of high tensile 10 or 11-gage steel and all movable parts have precision bearings. Transmissions operate in an oil bath and are completely enclosed. Belts on conveyor are made of 28-oz duck with Neoprene top and bottom cover. Made by **Wall Mfg. Co.**, Dept. NED, P. O. Box 5006, Winston-Salem, N. C.

For more details circle NED-4274 on enclosed inquiry slip

CUT STEAM COSTS

Powermaster® PACKAGED AUTOMATIC BOILERS with patented VORIFLOW® Combustion

SAVE FUEL and MAN-HOURS!

Thousands of Powermaster users are now getting top efficiency and low-cost steam or hot water for processing and heat after replacing out-of-date boilers with this modern, fully automatic, "packaged" steam generator.

- High efficiency cuts operating costs as much as 40%
- Packaged design saves excessive installation costs
- Automatic operation frees engineer for other duties
- Mounted on steel base—no bricking required
- Delivered fully wired and factory-tested
- Prompt service by factory-trained men

15 to 500 HP—FOR HOT WATER AND FOR STEAM UP TO 250 P.S.I.—for light oil, heavy oil, gas and combination gas/oil firing. Built to A.S.M.E. specifications and approved by Underwriters' Laboratories.

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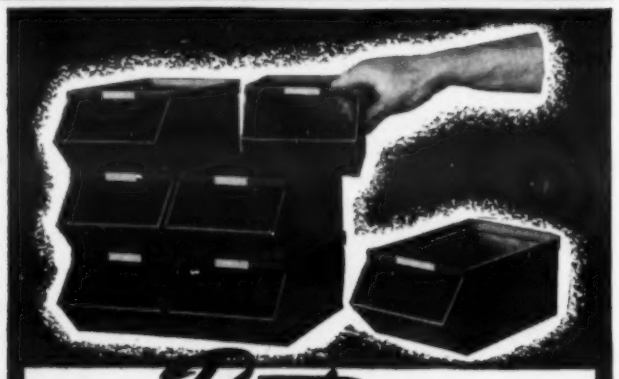
930 Morgantown Rd. Reading, Pa.

For more details circle NED-4277 on enclosed inquiry slip



Parts...

★ Where You Want Them . . .

★ When You Want Them

You'll save time, space and labor handling parts and material when you use these patented STACKBINS. STACKBINS keep parts instantly accessible—eliminate waste hand motions—stack compactly to form units of exactly the right shape and capacity—make order filling or assembly work faster, easier, more efficient. Heavy steel, all-welded construction. Sizes from 3¼" x 6" x 3¼" to 15" x 24" x 11". Prices from $.65 to $2.75.

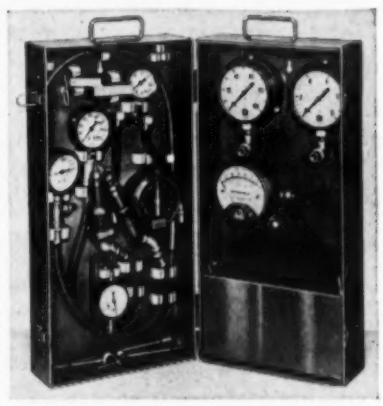
Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM "Stacked and Still Accessible"

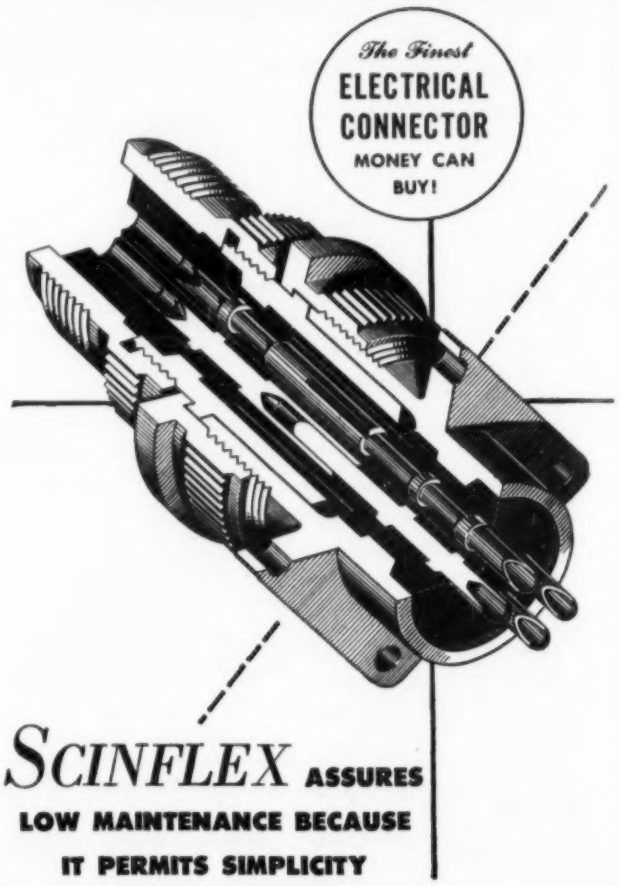
For more details circle NED-4272 on enclosed inquiry slip

DIESEL DIAGNOSIS KIT accurately checks engine operation



Diagnosis of trouble or making of preventive maintenance checks on General Motors diesel engines is function of Kent-Moore basis test kit No. J 4209-41. It includes all equipment required for checking timing, exhaust back pressure, engine rpm, blower intake restriction, air box, oil and crankcase pressure, plus cylinder liner position on all series 71 and 6-110 GM engines. Also available are tool Nos. J 1319-A and J 4494 compression gages for series 71 and 6-110 engines, respectively, and a fuel pressure gage for both series (KMO 320). Equipment, mounted in lightweight metal box for field or service department use, includes: 0 to 15 and 0 to 100 lb pressure gages, Magnehelic gage, 0 to 3600 rpm tachometer with flexible extension and adapters, dial indicator with attachments and cylinder liner gage block. Made by **Kent-Moore Organization, Inc.**, 5-106 General Motors Bldg., Detroit 2, Mich.

For more details circle NED-4275 on enclosed inquiry slip



SCINFLEX ASSURES LOW MAINTENANCE BECAUSE IT PERMITS SIMPLICITY

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

BENDIX SCINFLEX ELECTRICAL CONNECTORS

Bendix

SCINTILLA MAGNETO DIVISION of Bendix AVIATION CORPORATION

SIDNEY, NEW YORK

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

FACTORY BRANCH OFFICES: 118 E. Providencia Ave., Burbank, Calif. • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 582 Market Street, San Francisco 4, California

For more details circle NED-4278 on enclosed inquiry slip

TEFLON IMPREGNATED ASBESTOS PACKING

The Advantages of Teflon PLUS *Greater Resiliency* *Moderate Cost*

Chemically inert, heat-resistant, anti-hesive Teflon has solved many packing problems. But under certain conditions, Teflon's cold-flow characteristic causes trouble. The solution to cold-flow is Flexrock #401 braided white asbestos packing impregnated *throughout* with Teflon.

#401 offers solid Teflon's advantages *plus* superior resiliency, permitting a tight, lasting seal at low gland pressure, against *acids, alkalis and solvents.* #401 is versatile, eliminates the need for costly, machined Teflon rings. Stock it for applications demanding absolute *non-corrosion, non-contamination.* Won't "seize" a shaft or spindle; serviceable from −100°F. to 500°F. In continuous lengths, square section, from ⅛" to 1" by 1/16" increments.

We furnish a complete line of *Teflon Packing:* solid or impregnated in endless ring or continuous braided construction; *Teflon Gaskets:* solid or jacketed; *Teflon Stock:* sheets, tape, cylinders, rods, tubing, bars. *Also, special shapes.*

Mechanical Packing Division

FLEXROCK COMPANY

PHILADELPHIA 4, PA.

Mechanical Packing Division
FLEXROCK COMPANY
3603 Filbert Street, Phila. 4, Pa.

☐ Send more information on #401 Packing
☐ Send information on these other Teflon products_____

Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State_____

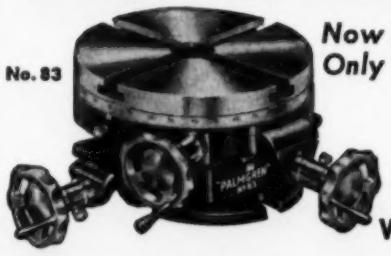
Please clip coupon to Company letterhead

For more details circle NED-4273 on enclosed inquiry slip

DUAL CROSS and ROTARY FEED

PALMGREN

Rotary, Index, Milling Table



No. 83

Now Only $54.50

Turns Your DRILL PRESS Into A VERTICAL MILLER

Think what this will mean in your shop! Can be used on any Drill Press, Lathe or Milling Machine and provides what is practically a universal milling machine.

Designed for use in all types of metal and woodworking shops. A precision table permitting fine work to close tolerances. It is accurate, speedy, well constructed and attaches quickly in a firm position.

Rotary feed calibrated in degrees; Cross feed in thousandths; Dual Cross Slide with cross feed 2⅛" each side of center or 4¼" overall. Has acme thread cross feed screws, adjustable gibs on cross slides. 40 to 1 worm and gear ratio in rotary feed. Equipped with bolt slots and locking screws.

No. 83 Table Dia. 8", T-Slots ⅜", Base Keyway ⅜", Base Dia. 6¼", Ht. 5", Wt. 37 lbs. Price Only $54.50. Other Types available, No. 82 Dual Cross Feed only $43.75; No. 86 Rotary Feed Only $46.75.

Order Today! If dealer can't supply, write us. Ask for Circular No. 10

CHICAGO TOOL and ENGINEERING CO.

Mfrs. of PALMGREN PRODUCTS Since 1918

8378 South Chicago Ave. • Chicago 17, Ill.

For more details circle NED-4276 on enclosed inquiry slip

TESTED—PROVEN—ACCEPTED!
CHOOSE THE
AIR VALVE
YOU HELPED DESIGN

Best for Trigger-Quick Control of All Air Operated Equipment
•
FULL FLOW
•
COMPACT
•
ONE MOVING PART

Send for FREE Catalog

MAC
MECHANICAL AIR CONTROLS, INC.
15313 W. 11 MILE RD. • ROYAL OAK, MICHIGAN

For more details circle NED-4279 on enclosed inquiry slip

LOW COST
Electronic
AIR FILTRATION

The Electro-PL is a unique dry-type, electronic air filter. Designed to provide intermediate air cleaning efficiency with maximum economy, it is now widely used for industrial, commercial and military installations. These total more than 5,000,000 cfm. The Electro-PL is dual-purpose . . . may be operated as either a dry-type air filter or with the electronic feature as seasonal conditions vary. Available in standard units for straight or "V" bank arrangements to meet almost any air volume requirements. For complete details write for Engineering Bulletin No. 257.

American Air Filter
COMPANY, INC.
391 Central Avenue, Louisville 8, Ky.
In Canada: Darling Bros., Ltd., Montreal, P. Q.

For more details circle NED-4280 on enclosed inquiry slip

ONE

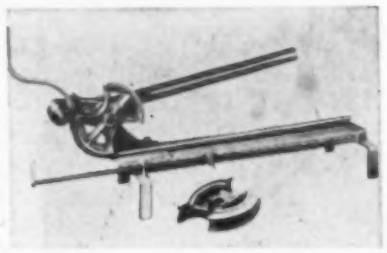
is A COMPLETE power shop

A De Walt is a complete power shop in *one* machine. It saws at any angle, it dadoes, routs, shapes, tenons, grinds, sands, drills, and even does light metal cutting. For one small investment, in money and in floor space, you get the equivalent of a warehouse full of cutting equipment. Write for catalogue to De Walt Inc., Dept. G-5, Lancaster, Pa.

DE WALT
POWER SAWS
DE WALT INC., Lancaster, Penna.
Subsidiary of American Machine & Foundry Co., New York

For more details circle NED-4281 on enclosed inquiry slip

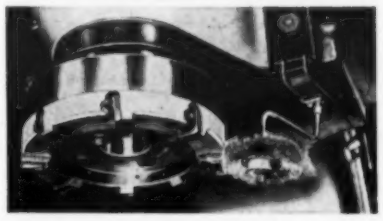
PIPE & CONDUIT BENDER for precision bends on the job



A number of uniform bends in any desired degree, including offsets can be made in ½ and ¾-in. pipe, rigid conduit and thin wall conduit with portable Tal Handy-Bendy bending device. It has measuring gage and bend degree indicator to control precision bends made on the job. Experience is not required. Bender is especially suitable for use in open or slab work, or any job where small or large numbers of identical bends are required. It is rigidly constructed from lightweight metal and weighs only 30 lb. Made by **Tal Bender, Inc.,** Dept. 4, 417 N. Water St., Milwaukee 2, Wis.

For more details circle NED-4282 on enclosed inquiry slip

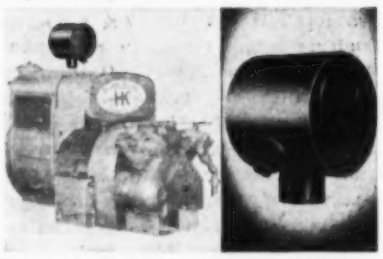
CHIP REMOVING BRUSH mounts magnetically on machine



Tool life on steel milling operations can be prolonged by this chip remover, a rotating wire brush on a magnetic base for mounting on any horizontal or vertical milling machine. Brush is placed in contact with the revolving teeth or blades and serves to push off adhering chips. A 45-50 lb Alnico permanent magnetic base with a V-slot permits mounting on all degrees of cylindrical surfaces or any right angle surface. The nonmagnetic stainless steel ¼-in. OD holding rod set in a ball socket permits universal setting. The rod can be bent to any angle to bring the brush in contact with the cutter blades. Made by **Detroit Milling Cutter Co.,** 28625-6 Grand River Ave., Farmington, Mich.

For more details circle NED-4283 on enclosed inquiry slip

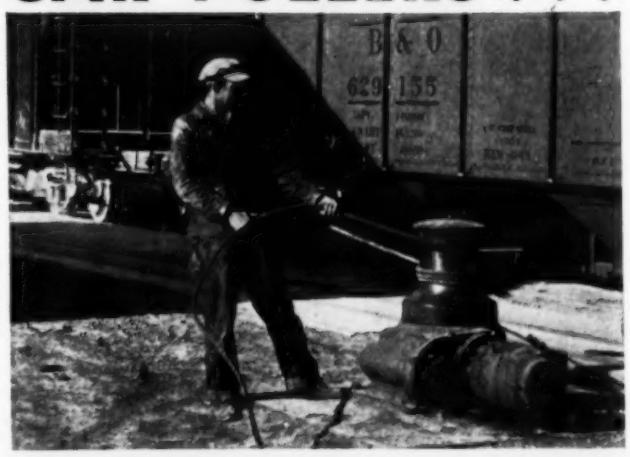
SPARK ARRESTER-MUFFLER for all internal combustion engines



Developed for use on all types of internal combustion engines, this small lightweight spark arrester also offers moderate silencing. HT series unit is suited for oil well power plants, tractors, compressors and road equipment where it is imperative to eliminate fire danger. Arrester catches carbon particles and sparks contained in the exhaust gases as they enter the intake nipple and throws them by centrifugal force into traps fitted with exterior plugs for easy cleaning. Models are designed for vertical mounting and have either slipover or threaded nipples. Made by **Kittell Muffler & Engineering Co.,** 915 S. Santa Fe Ave., Los Angeles 21, Calif.

For more details circle NED-4284 on enclosed inquiry slip

CAR PULLERS . . .



Bulletin No. 842 describes and pictures Jeffrey Car Spotters. Two types for handling one to six cars. Also used for docking barges, handling moving operations in lumber yards, foundries, steel mills, brick plants, and other industries. Specifications upon request.

JEFFREY
ESTABLISHED 1877
THE JEFFREY MANUFACTURING CO.
952 Fourth St., Columbus 16, Ohio

For more details circle NED-4285 on enclosed inquiry slip

Not on the Payroll since Transall took over

Pre-Lubricated
Belt Conveyor Idlers

No Lubrication Labor
No Lubricant Cost

TRANSALL INC.
Manufacturers of a complete line of Belt Conveyor Equipment
119 North 11th St. Birmingham 4, Ala.

For more details circle NED-4286 on enclosed inquiry slip

ANTIQUE CLEANING
cuts into
YOUR PROFITS

Your *production methods* may be at the peak of efficiency . . . but how about your *cleaning methods?* Out of date floor cleaning equipment can affect your profit picture just as much as labor, material and taxes.

Tornado cleaning equipment is engineered to fulfill the needs of modern commercial and industrial cleaning. Just think of a vacuum cleaner that pulls air at velocities over 300 M.P.H.—picks up water, oil, scrubbing solutions, metal chips or dirt in a single stroke—plus an adaptability to clean machinery and overhead fixtures as well as all type floors.

Protect your profits with America's most modern floor cleaning equipment—Write for Tornado Bulletin 607 today.

THE FAMOUS TORNADO 92
"4 Cleaning Tools in 1"

A shoulder-type vacuum cleaner for hard-to-reach spots.

A portable blower for cleaning motors and machinery.

A blower-sweeper for cleaning aisles and under seats and equipment.

A conventional tank cleaner for wet or dry pickup.

BREUER ELECTRIC MFG. CO.
5116 NORTH RAVENSWOOD AVENUE • CHICAGO 40, ILLINOIS

For more details circle NED-4287 on enclosed inquiry slip

Use ARCOS Low Hydrogen Electrodes

There's nothing experimental about welding high tensile steels with Arcos Low Hydrogen Electrodes. They've all been tested by time and service on armor welding as well as commercial applications.

ARCOS LOW HYDROGEN ELECTRODES
Tensilend 70
Tensilend 120
Nickend 2
Chromend 1M
Tensilend 100
Manganend 1M
Manganend 2M
Chromend 2M

ARCOS CORPORATION
1500 South 50th St. Phila. 43, Pa.

WELD WITH ARCOS
Stainless, Low Hydrogen and Non-Ferrous Electrodes

For more details circle NED-4288 on enclosed inquiry slip

COMPRESSION TESTER
has 0-100 and 0-1000 lb ranges

Capable of handling specimens up to 12 x 12 x 16 in., this compression tester for laboratory use can make flexure tests of plastics, glass, ceramics, insulation board, plywood, asbestos-cement shingles and carbon brush materials, among others. General compression testing of springs can be performed. Accuracy is within ½-per cent at half capacity and above and within ½-lb at lower loadings. A dual load range is provided: 0 to 100 lb and 0 to 1000 lb. Mechanism consists of two platens, an upper or traveling platen and lower or weighing platen. A variable speed drive with ⅛-hp 110-v ac motor enables setting and repeating any desired speed of the upper platen between 0 and 2½ ipm. Platen is guided by four rigid columns. Made by **Fisher Scientific Co.,** 715 Forbes St., Pittsburgh 19, Pa.

For more details circle NED-4291 on enclosed inquiry slip

PYROMETER-CONTROLLER
achieves hair-line process control

A type of proportioning control for processing equipment such as ovens, kilns, vats and plastic molding machines is achieved by model 293 Capacitrol, a compact indicating pyrometer controller which incorporates built-in straight-line control unit. Lineotrol feature automatically reduces to minimum the 'on' and 'off' variation of instrument above and below preset control point. Unit also compensates for transfer lag inherent in heat processing systems. It measures 7⅝ x 8⅛ x 7 25/32 in. and mounts flush on original heating equipment or instrument panels. Wide range of standard scales in various thermocouple calibrations are available. Thermocouple break protection, interchangeable voltage selector plugs, front accessibility and plug-in terminal panel are features retained from previous models. Made by **Wheelco Instruments Co.,** 829 W. Harrison St., Chicago 7, Ill.

For more details circle NED-4292 on enclosed inquiry slip

DO YOU KNOW? The well-known Polaroid Land camera principle can be employed for scientific and industrial picture work using 5 x 7-in. or 8 x 10-in. commercial cameras. Finished prints are available within 1 minute after picture is taken. The Polaroid Land back mounts quickly on commercial camera. Distributed by Burke & James Inc., 321 S. Wabash Ave., Chicago, Ill.

For more details circle NED-4293 on enclosed inquiry slip

SAW CONCRETE AND ASPHALT
Maintenance costs slashed by sawing patches, trenches, contraction joints before breaking.

Now concrete can be sawed! By precision sawing of repair patches (traffic - damaged floors, spalled joints, etc.), tremendous savings are made. A sawed cut made ¼ the slab depth provides a perfect plane of weakness for breaking. Only perfectly smooth, straight edges remain.

On new construction, sawing contraction joints in poured slabs replaces costly hand forming and eliminates the usual spalling and high maintenance costs.

A variety of "DUSTLESS" Clipper Concrete Saw models to suit every plant need are available. While the 7½ and 13½ H.P. Models C-75 and C-130 are most popular, electrically-powered models are available for sawing in confined space.

The manufacturer need only to know the type of concrete aggregate or asphaltic concrete for proper selection of Clipper Metal Bonded Diamond Blades to accomplish the cutting.

Illustrated data available from **Clipper Manufacturing Company,** Room 401, 2800 N. Warwick, Kansas City 8, Mo. (Advt.)

For more details circle NED-4295 on enclosed inquiry slip

STURTEVANT
Laboratory Machines
Assure Quality of Products
Fast-Economical-Accurate

Sturtevant Laboratory Equipment meets the exacting requirements of laboratory work. They are fast and accurate...provide true samples. Rugged and dependable, Sturtevant equipment actually has all the features of full size machines plus extra accuracy and wider range of adjustment. The "Open-Door" accessibility permits quick, thorough cleaning . . . prevents the possibility of previous batches from contaminating new samples.
Investigate Sturtevant equipment for your laboratory. Write for complete details and catalog.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASS.

For more details circle NED-4289 on enclosed inquiry slip

. . . but you can slash your packaging costs with this super-strong reinforcing tape

Hundreds of straining optimists have tried to break a 1" strip of "TAPE-STRAP". Nobody's done it yet . . . and no wonder. This amazing tape has a tensile strength of 180 pounds per inch of width.

Savings in packaging costs, up to 85% over previous methods, are reported by "TAPE-STRAP" users. "TAPE-STRAP" is so easy to apply that shipping room operations go faster. It's safer . . . no sharp edges . . . and it's put on without pressure. No special application equipment is required.

"TAPE-STRAP" is so strong that short, 10" strips across container seams are all you need for most applications. "TAPE-STRAP" has a center layer of resilient, shock-absorbing material that carries, imbedded in it, thousands of tiny filaments. These filaments, 5,000 per inch of width, run lengthwise.

Bonded to this center layer, above and below, is tough, pliable kraft. A deep coating of the finest, water-soluble gumming assures instant, permanent adhesion. "TAPE-STRAP" can't be slipped off and replaced.

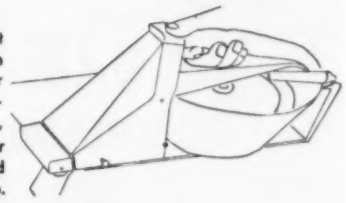
Three short strips of "TAPE-STRAP" reinforce the 8-foot seam of this corrugated carton, hold up to 500 lbs. "TAPE-STRAP" saves 50% on material, 75% on labor costs for Pyramid Mouldings, Inc., Chicago.

APPROVED—"TAPE-STRAP" is approved by the Official, Southern, and Western Classification Committees (Rule 41, Sec. 8 (b), Supp. 29, C.F.C. No. 19) and by Railway Express Agency, Inc., (Supp. No. 36 to Official Express Classification No. 34).

FREE Sample Roll—Test "TAPE-STRAP'S" astonishing strength, try it on your own containers. Write for free sample roll and details of "TAPE-STRAP" construction and use.

Seal containers, anywhere with new, *portable*

Roll-On-Sealer



Here's a new and different gummed tape dispenser, with new-type, non-spillable water tank. Seal cartons in warehouse, on the production line, on the carrier. Roll-On-Sealer measures, moistens, applies, and cuts tape in one easy operation. Write for details.

*"Tape-Strap" is the trade mark of the brand of filament tape manufactured by Mid-States Gummed Paper Co.

LEADERS IN THEIR LINE

MID-STATES Gummed Paper Company
2519 S. Damen Ave., Chicago 8, Ill.

BRANCH OFFICES: New York, Philadelphia, Cleveland, Detroit, St. Louis, Los Angeles

For more details circle NED-4296 on enclosed inquiry slip

PRESTO LIGHTER SAYS:

"... and our finishing costs have come *tumbling* down."

TUMB-L-MATIC helped Presto Lighter ... TUMB-L-MATIC can help you

Presto Lighter Co., was unfamiliar with and skeptical about cutting finishing costs with Tumb-L-Matic methods. They asked to be shown. Tumb-L-Matic engineers analyzed a sample lighter and then recommended an individualized low-cost Tumb-L-Matic Process. Result ... "finishing costs have come tumbling down."

Tumb-L-Matic is a proved process which scientifically combines equipment, compounds, supplies and techniques to produce revolutionary developments in defining, cutting, smoothing and polishing metal products regardless of size or shape.

TRY IT BEFORE YOU BUY IT

Let our engineers analyze a sample (or detailed description) of your product, recommend an individualized, low-cost TUMB-L-MATIC PROCESS. Complete production data lets you figure finishing costs before you invest a cent. Send for Bulletin.

TUMB-L-MATIC, INC.
FORMERLY LUPOMATIC INDUSTRIES
7618 4510 BULLARD AVENUE • NEW YORK 70, N. Y.

For more details circle NED-4290 on enclosed inquiry slip

GAST rotary AIR MOTOR drives agitator for BONDACTOR CEMENT GUN

PROBLEM: Design to feed dry sand-cement aggregate uniformly from mixing hopper to airline of Bondactor Cement Gun.

SOLUTION: Agitate dry mixture with Gast 4 AM rotary Air Motor driven by compressor which supplies gun.

RESULT: Economy, dependability, and needed flexibility in feeding from ½ to 2 cu. yds. of concrete per hour. Unit withstands rough treatment, outdoor use by contractors.

Yes — this is another of scores of design problems solved with Gast rotary Air Motors. If rotary air power is a possibility on your product, let Gast engineers review your problem. You may profit from their concentrated experience with air power, low vacuum or pressure. Remember, "Air may be your answer!" Write for details.

SEE OUR CATALOG in SWEET'S FILE for PRODUCT DESIGNERS

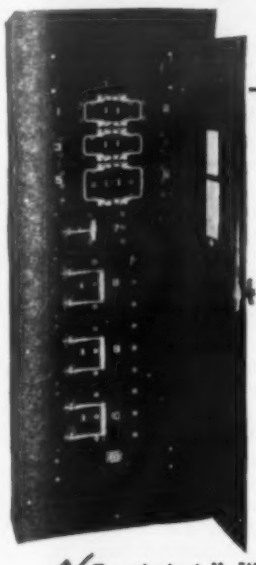
Gast Application Ideas booklet — showing 26 design problems solved — sent upon request.

Original Equipment Manufacturers for over 25 years

GAST ROTARY — AIR MOTORS · COMPRESSORS · VACUUM PUMPS
(TO THREE H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

For more details circle NED-4294 on enclosed inquiry slip

Saflex FUSIBLE DISTRIBUTION PANELBOARDS



—they're Horsepower Rated

All circuits may be opened safely under maximum load—plus other important features

✔ Each circuit is in individual steel box readily removable and interchangeable with circuits of other ratings.

✔ Double break switch jaws on rotary blade holder can be turned to "OFF" and cover locked. Cam action handle supplies operating force necessary to high contact pressure. Positive pressure fuse clips minimize heating.

✔ Easy to install. Wiring gutters are oversize. Interior and trim are separate from box.

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

DETROIT • MILWAUKEE • LOS ANGELES

▲ For more details circle NED-4297 on enclosed inquiry slip ▲

MICO ENGRAVERS

An accurate, inexpensive and portable machine for engraving name plates and panels, forming small molds and dies, and profiling small parts. Geometrically correct for true three dimensional work. Accurately duplicates master copy in metals, plastics or wood. Rugged, sturdy construction.

COMPARE THESE SUPERIOR FEATURES

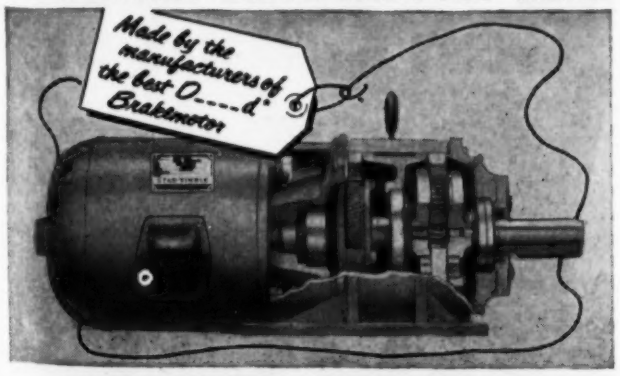
- Engraves in 2 or in 3 dimensions
- Pantograph permits 4 reduction ratios
- Micrometer depth control graduated in thousandths of an inch
- High speed, ball bearing spindle
- Chuck 1/8" to take variety of small tools, burrs, mounted points, as well as standard cutters.

Send for Illustrated Catalog

MICO INSTRUMENT COMPANY
80D Trowbridge St. Cambridge, Mass.

▲ For more details circle NED-4298 on enclosed inquiry slip ▲

PLANETARY DRIVE REDUCES WEAR



. . . LENGTHENS LIFE of Star-Kimble Gearmotors

The planetary gear speed-reducing system in Star-Kimble Gearmotors distributes bearing load uniformly, reduces risk of wear. The helical gears are precision-shaved for quiet operation and long life.

Other features: Splash-type lubrication of bearings and gears. Mounting in any position. Integral design and manufacture—each part designed to work with all other parts—all major components made by Star-Kimble.

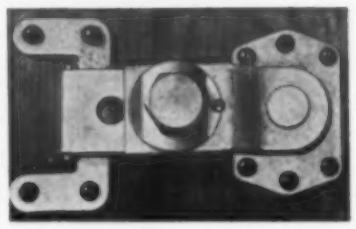
*Demanded by industry for tough start-and-stop jobs

For details, write for Bulletin B-601.

STAR-KIMBLE
MOTOR DIVISION OF
MIEHLE PRINTING PRESS & MFG. CO.
214 Bloomfield Avenue Bloomfield, New Jersey

▲ For more details circle NED-4299 on enclosed inquiry slip ▲

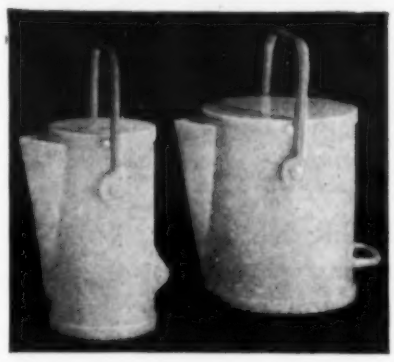
HEAVY DUTY FASTENER designed for structural use



A 90-degree twist of a wrench opens or closes this compact all-steel fastener which is capable of exerting up to 1500-lb pull-down pressure. Designed for structural uses as in prefabricated buildings, for fastening panels or for large storage containers, device provides positive locking without springs. It has high impact and drop test resistance, is troublefree in −70° F temperatures and will carry up to 4000-lb tension load. Engagement latch detail can be varied to meet different conditions. Made by **Simmons Fastener Corp.**, 1757 N. Broadway, Albany 1, N. Y.

▲ For more details circle NED-4300 on enclosed inquiry slip ▲

SAFETY JUGS of polyethylene are light, rigid



Resistance against most alkalies and acids, including hydrofluoric acid, is offered by lightweight, rigidly constructed Agilene (polyethylene) safety jugs. Designed for handling of small quantities of corrosive chemicals, jugs can be dropped or suffer rough usage without cracking or breaking. Splashing or spilling are prevented as escape of liquid is confined to the spout. Jugs are made in 1½ and 3½-gal sizes weighing 4½ and 5¾ lb, respectively. Made by **American Agile Corp.**, Dept. E, P. O. Box 168, Bedford, O.

▲ For more details circle NED-4301 on enclosed inquiry slip ▲

DRILL GRINDER color finish resists rust

Color finish is feature of Sterling drill grinder and provides increased safety as well as improved appearance. Coloring is example of modern trend in machine shop equipment finishing. Body and motor guards are light green and drill holder and inside of wheel guards are buff. Easily cleaned and resistant to corrosion, finish encourages operators to keep machine in spic and span condition. Made by **McDonough Mfg. Co.**, 1550 Galloway St., Eau Claire, Wis.

▲ For more details circle NED-4302 on enclosed inquiry slip ▲

for safety's sake

PUT YOUR LOAD ON *the Hook that has never failed*

Since its development over 25 years ago, *no one* has *ever* reported the failure of a Coffing Hoist hook under any load or overload.

. . . And you'll find the same careful engineering for greater safety . . . the same close attention to detail in every part of a Coffing Hoist, for example:

SAFETY-PULL RATCHET LEVER HOISTS have these safety features:

★ Ratchet and pawl cannot slip or drop load.
★ Handle bends at point of maximum safe overload.
★ Handle will not spin or fly up.
★ Factory-tested at 100 percent overload.

10 sizes, 1,500 lb. to 15 tons

Find out more about the Coffing Safety-Pull hoists that are built stronger for safety's sake. Write Dept. X5SP.

COFFING HOIST CO., Danville, Illinois
Sold by Distributors Everywhere

Quik-Lift Electric Hoists • Hoist-Alls • Mighty-Midget Pullers • Spur-Gear Hoists • Differential Chain Hoists • Load Binders • I-Beam Trolleys

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SHELDON CHICAGO

A better Lathe from any angle

Judge it from any angle: for accuracy, stamina, rigidity or capacity (for size). Check its component parts—its spindle, spindle bearings, lead screw, apron, carriage, bed, gearing, or the power delivered by its drive—you will find the SHELDON Lathe a quality tool both in appearance and "under the hood".

Write for Catalog

SHELDON MACHINE CO., Inc., 4215 North Knox Ave., Chicago 41, Ill.

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Lincoln BULLNECK* FITTINGS

The Only Complete Line of Grease Fittings with THE BALL-IN-THE-HEAD

SEALS DIRT OUT . . . GREASE IN

Throat of Ordinary Hydraulic Fittings Clog with Dirt and Grit

Look at these Construction Features

FOUND ONLY IN LINCOLN BULLNECK* FITTINGS . . . *AT NO EXTRA COST!*

1. **Flush Ball Check**—Head can be wiped clean without forcing dirt into fitting and into bearing.
2. **Large Grease Passage**—The larger internal diameter permits greater flow of lubricant.
3. **Special Spring Design**—Spring cannot be compressed to restrict flow of the heaviest lubricants.
4. **Sturdier Construction**—Enlarged neck size and projecting locking pad protect against damage and wear.

BULLNECK* FITTINGS Are Available in the Complete Range of Types and Thread Sizes

Write for Additional Information and Catalog, or Contact Your Nearby Lincoln Sales Office

BOSTON, MASS. H. G. Davis, Inc. 8 St. Mary's Street Kenmore 6-5175
BRIDGEPORT, CONN. H. G. Davis, Inc. 195 Dewey Street Bridgeport 5-8160
CHICAGO, ILLINOIS Lincoln Eng. Co. of Ill. 2415 S. Michigan Avenue Calumet 5-6022
CLEVELAND, OHIO Lincoln Lub. Systems, Inc. 4500 Euclid Avenue Express 1-4334
DETROIT, MICH. Lincoln Engineering Co. 8627 Woodward Avenue Trinity 5-3484
EAST ORANGE, N. J. Lincoln Lub. System, Inc. 18 Central Avenue Orange 3-3188
FORT WORTH, TEXAS Fritz Keller P. O. Box 9008 Sunset 5451
LOS ANGELES, CALIF. Lincoln Eng. Co. of Calif. 2844 S. Grand Avenue Richmond 0151
MILWAUKEE, WISC. Lincoln Equipment Co. 1618 West Wells Street Division 2-1191
LONG ISLAND, N. Y. Lincoln Lub. Systems, Inc. 48-14 36th Street Ravenswood 9-2529
BERKELEY, CALIF. Lincoln Eng. Co. of Calif. 3033 San Pablo Ashberry 3-6726
PAWTUCKET, R. I. H. G. Davis, Inc. 587 Pawtucket Avenue Pa. 2-7400
PHILADELPHIA, PA. Lincoln Engineering Co. 3117 N. Broad Street Radcliff 5-8900
PITTSBURGH, PA. Lincoln Engineering Co. 134-36 S. Whitfield Montrose 1-1444
PORTLAND, OREGON Pioneer Equipment Co. 1018 S. E. 8th Avenue Empire 0488

• • • PIONEER BUILDERS

*Tradename Registered

LINCOLN LUBRICATING EQUIPMENT • • •

LINCOLN ENGINEERING CO., 5782 Natural Bridge Ave., St. Louis 20, Mo.

▲ For more details circle NED-4305 on enclosed inquiry slip ▲

Send For Your Free Copy

SLIPPING ACCIDENTS? Write for Booklet A-4

This Free 8-page Booklet Shows You How To End Them with A.W. ALGRIP

ABRASIVE ROLLED STEEL FLOOR PLATE

- A.W. ALGRIP is the world's only Abrasive Rolled Steel Floor Plate.
- Wet or dry, ALGRIP prevents slipping—even on steep inclines!
- Light, tough—thinner sections can be used.
- Easy to install—needs no maintenance.
- Over 1001 plant and product applications—wherever men walk or climb.

THERE'S NEVER A SLIP ON A.W. ALGRIP

A.W. ALGRIP

ABRASIVE ROLLED STEEL FLOOR PLATE

Product of ALAN WOOD STEEL COMPANY

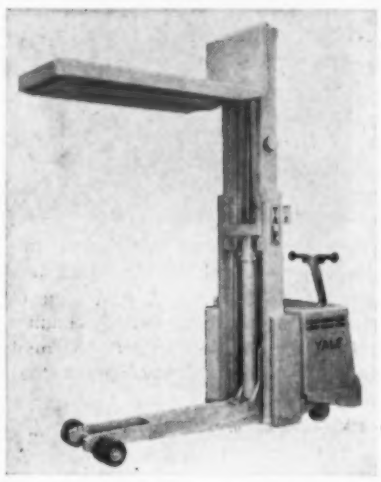
Conshohocken, Pa.

Over 125 Years of Iron and Steel Making Experience

Other Products: PERMACLAD Stainless Clad Steel A W SUPER-DIAMOND Floor Plate · Plates Sheets · Strip · (Alloy and Special Grades)

▲ For more details circle NED-4306 on enclosed inquiry slip ▲

SMALL HIGH-LIFT TRUCK
telescopic unit has 4000-lb capacity



Designed for high stacking of skids and skid bins, telescopic high-lift Worksaver powered hand truck handles up to 4000-lb loads. Lowered platform height is 6½ in., and maximum height of lift is 126½ in. Articulated frame permits continuous floor contact of load and drive wheels regardless of ramps or floor level variations. Hoist pushbutton on control handle and hand or foot operated lowering control on front of battery compartment assure ease of operation. Twin hydraulic pumps and motors are used for fast lifting. Relief valve protects equipment from harmful overloads. Brakes are applied and power is "off" when handle is in full up or full down position. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

▲ For more details circle NED-4309 on enclosed inquiry slip ▲

PRODUCTION BORING with E-Z SET by Maxwell

Only the MAXWELL E-Z Set boring tools feature high speed operation, micrometer-like adjustment to 0.0001-inch and maximum boring range.

Interchangeable shanks permit E-Z Set boring tools to be used in turret lathe, jig-bore, milling machine, boring mill, automatic or other machine tools. Because they can be adjusted for cut in only one-tenth the time formerly required by similar tools, these Maxwell-made tools can meet high-speed production on schedules.

E-Z Set boring tools are available in three models having maximum boring bar capacities of ½, 1 and 1½ inches and covering a boring range of from ⅜ to 20 inches.

Write today for catalog.

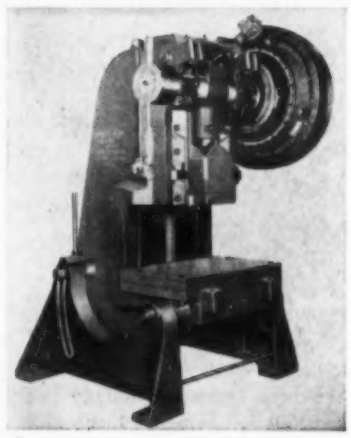
393-MC

THE MAXWELL COMPANY

380 Broadway • Bedford, Ohio

▲ For more details circle NED-4307 on enclosed inquiry slip ▲

INCLINABLE POWER PRESS
back-geared and flywheel types have 60-ton capacity



Heavy duty one-piece alloy frame with built-in tie rods for extra reinforcement to gap of press is feature of 60-ton capacity Press-Rite open back inclinable power press. Tie rods minimize deflection, binding or misaligning of dies on heavy work. Press has Airflex constricting drum type wear-compensating clutch and brake system. Brake and clutch cannot be engaged simultaneously, eliminating drag and excessive heating. Clutch gripping pressure can be set for every operation and tonnage required.

Other features include heavy ramslide with long ramways, triple lubricated with replaceable bushed hole for holding die shanks in slide, plus ball and socket adjusting screw and totally enclosed antifriction roller bearings in flywheel. Clutch is mounted on crankshaft in back-geared model to eliminate starting and stopping of gears for each stroke. Bolster area is 21 x 32 in. and throat depth is 11 in. Shut heights and strokes are optional. Made by **Sales Service Machine Tool Co.**, Dept. N, 2363 University Ave., St. Paul 4, Minn.

▲ For more details circle NED-4310 on enclosed inquiry slip ▲

free

MONEY-MAKING FACTS ABOUT TUFFLEX

These two folders are yours for the asking. They give technical facts and specifications about Tufflex—the fiber felt material that offers industry a rare combination of low thermal conductivity—effective shock absorption—vibration dampening—highly efficient cushioning—better protective padding. Tufflex is finding new uses among manufacturers who want to cut production costs and increase quality. Write now for descriptive literature and a sample of Tufflex. Wood Conversion Co., Dept. 127-52, First National Bank Bldg., St. Paul 1, Minn.

A PRODUCT OF WEYERHAEUSER

TUFFLEX*

*REG. U. S. PAT. OFF.

▲ For more details circle NED-4312 on enclosed inquiry slip ▲

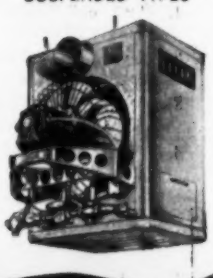
Everyone Can Count on VEEDER ROOT

Yes, jet pilots count on this interesting instrument to tell them how much fuel is left . . . when they'd better "hit for home." And in the same way, it counts rounds of ammunition remaining in the plane's machine guns, the number of film-exposures remaining in aerial cameras, etc., etc. So you can see how one type of Veeder-Root Counter can come up with many answers to many problems. And within the literally *infinite* scope of the counting process, there may well be some badly needed answers we can work out for you . . . if your work is badly needed for defense. Write.

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONN., NEW YORK 19, N. Y.

▲ For more details circle NED-4313 on enclosed inquiry slip ▲

FLOOR AND SUSPENDED TYPES



SPOT HEAT WHERE MEN WORK . . . with MECHANIZED GAS UNIT HEATING

Install REZNOR WORLD'S LARGEST-SELLING Automatic GAS UNIT HEATER

Reznor unit heaters need only gas and electric supply plus flue exhaust arrangement for complete automatic operation. You can provide heat in winter and circulated air in summer to give employees the comfort they need to produce more efficiently. Because each unit produces and distributes heat where and when you want it, and installs so easily, you have flexibility to follow shop rearrangement with low-cost heating arrangement. For modern heating of new construction, expansion or remodeling specify Reznor unit heating. Reznors install economically in any size area.

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14 UNION ST. · MERCER, PENNA.

Send me 20-page catalog in full color

Name_____
Firm_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-4308 on enclosed inquiry slip ▲

"Marking Parts in COLOR has speeded up our Production"

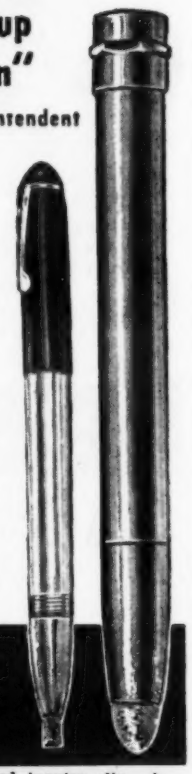
—writes a Plant Superintendent

And that's where the Flo-master Felt Tip Marker comes in. The complete range of colored Flo-master Inks permits detailed and accurate identification for assembling, stocking, inspecting. And the Flo-master Felt Tip just glides over any surface—metal, wood, plastic, etc. with fine lines or BIG BOLD lines.

Flo-master semi-opaque inks—waterproof, non-smudging, fast-drying—are recommended for dark, hard-to-mark surfaces using the KING SIZE Flo-master. For light colored surfaces use Transparent Inks with POCKET SIZE Flo-master.

This versatile marker is also ideal for marking shipping cartons, boxes, making posters, graphs, sketches.

Contact your supplier or write direct to Cushman & Denison Mfg. Co., 153 W. 23rd St. N. Y. 11.



Flo-master FELT-TIP MARKER

▲ For more details circle NED-4311 on enclosed inquiry slip ▲

30 DAY DELIVERY

HOW TO SPEED PRODUCTION

HOW TO SAVE ⅓ INSTALLATION SPACE

HOW TO GET MORE BORE POWER

HOW TO SAVE MONEY

Use Dependable, Powerful

O-M CYLINDERS

AIR—WATER—HYDRAULIC

In full range of sizes (1½" to 8" bores). All machined steel with bearing bronze throughout. Interchangeable parts and mounting brackets.

FREE CATALOG Brand new! 28 pages of specifications, diagrams, and parts listing.

FREE TEMPLATES Complete set. Shows all cylinders and mounting brackets, ½ scale.

Write today to

ORTMAN MILLER MACHINE CO.

1222 150th St., Hammond, Indiana

For more details circle NED-4314 on enclosed inquiry slip

BLACKMER HAND PUMPS

designed for *Liquid Materials Handling* IN YOUR PLANT

Speed liquid materials handling. Eliminate spillage. Promote safety. Cut costs. Blackmer builds the only complete line for industrial use.

MOUNT ON DRUMS, WALLS, MACHINES, WHEEL TANKS, SKID TANKS, UNDERGROUND STORAGE OR ON PIPELINES.

7 to 28 G.P.M.

For lube oils, solvents, paints, thinners, fuel oils, gasoline, cutting oils, soaps, and other liquids.

GET HAND PUMP DETAILS

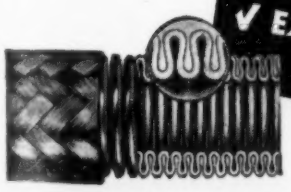
Write for catalog folder "HP6" and price list.

BLACKMER PUMP COMPANY
1809 Century Ave., S.W. - Grand Rapids, Mich.

For more details circle NED-4315 on enclosed inquiry slip

If you have any of these problems in your connections

✓ VIBRATION
✓ MISALIGNMENT
✓ FLEXATION
✓ EXPANSION and CONTRACTION



solve them with CMH FLEXIBLE METAL HOSE

Scores of troublesome connection problems where the above conditions exist are effectively solved with CMH Flexible Metal Hose. Manufactured in a variety of types and metals, CMH Flexible Metal Hose is available for pressures from vacuum to 12,000 psi (burst); temperatures from sub-zero to 1600° F. Write for literature, mentioning the types of connection problems you have.

CMH

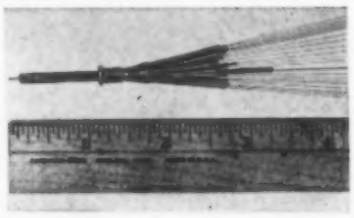
CHICAGO METAL HOSE
DIV. FLEXONICS CORPORATION
1343 S. Third Avenue, Maywood, Illinois

Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.

In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-4316 on enclosed inquiry slip

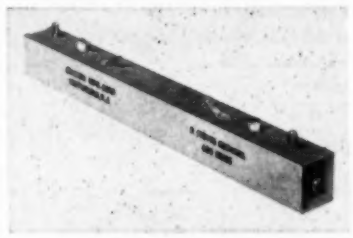
TINY SLIP RING ASSEMBLY
meets 500 v hi-pot insulation needs



Minute size and great dimensional accuracy is combined in subminiature slip ring assembly which incorporates 32 hard silver slip rings with individual color-coded leads. Rings are 0.020-in. wide, have 0.141-in. diameter and 0.010-in. barrier width. Despite small size (1.011-in. long) assembly meets specified insulation requirements of 500 v hi-pot, intercircuit. Designed for use in instruments for pin-point air navigation, unit is produced by machining plastic blank to receive silver rings which are electroplated in place. Rings are given palladium and rhodium or gold finish to prevent tarnish and minimize friction. Made by **Electro Tec Corp.**, South Hackensack 2, N. J.

For more details circle NED-4317 on enclosed inquiry slip

ELECTRICAL DELAY LINE
delays up to 100 microseconds



Computor, radar, television and other electronic applications where delays are required ranging up to 100 microseconds can be served with this electrical delay line. It features low-loss, good temperature stability through use of temperature compensating capacitors and small physical size. Minimum delay time is 1.1 microsecond and rise time (from 10 to 90 per cent of step function) is 0.1-microsecond. Unit weighs 5 oz. measures ¾ x ⅞ x 8⅛ in. and has 15 sections. Bandwidth is 2.0 mc, attenuation is less than 1 db, and characteristic impedance is 460 ohms. Made by **Gulton Mfg. Corp.**, 210 Durham Ave., Metuchen, N. J.

For more details circle NED-4318 on enclosed inquiry slip

LIVE ROLLER CONVEYOR
made in 6 to 36 in. widths

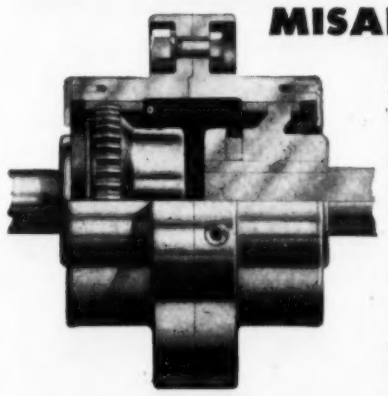
Two-in. diameter rollers spaced to meet the customer's requirements are incorporated in live roller conveyors offered in widths from 6 to 36 in. Rolls are driven by a belt passing underneath and touching each roller above it. Standard conveyor speed is 50 fpm, but this can be increased or decreased as desired. Variable speed units are also available. Made by **Sage Equipment Co.**, 28 Essex St., Buffalo 13, N. Y.

For more details circle NED-4319 on enclosed inquiry slip

AJAX DIHEDRAL

FLEXIBLE COUPLINGS

Protect Against Excessive **MISALIGNMENT**



Stock couplings are built to handle misalignment up to 4°

Teeth can be cut to order to handle greater misalignment.

▶ Design, installation and maintenance men are now saving thousands of hours, and dollars by eliminating necessity for precision alignment of direct-connected machines.

Exclusive Ajax Dihedral tooth shape provides for extreme misalignment with tooth clearance (backlash) kept to oil film requirements.

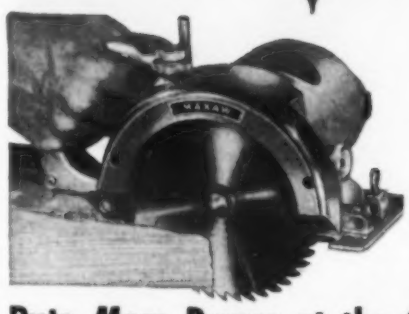
Positive oil seals keep lubrication in and dirt out.

Send for new bulletin.

AJAX FLEXIBLE COUPLING CO. INC.
WESTFIELD, NEW YORK

For more details circle NED-4320 on enclosed inquiry slip

MAXAW 700
magic pivot does it!



$69.50

Heavy Duty—All Ball-and-Roller Bearing—Industrial Quality

Puts *More Power* at the Cutting Edge!

magic • pivot gives you a more powerful saw because it applies a basic engineering principle. Here's how: power always diminishes as it reaches out from its source. **magic • pivot** shortens this distance by using exclusive "stub-radius" blades that put the power of the saw shaft closer to the blade edge. Actually out-cuts other saws costing $115 to $125!

magic • pivot does even more! It makes the MAXAW weight only 10 lbs.—5 to 8 lbs. less than others—cut deeper at 45° with blade to spare in 2-in. dressed lumber—blades lasts twice as long. Get all the facts—do more, save more—with MAXAW.

Free Pamphlet— Find out what **magic • pivot** can do for you. Send for Pamphlet I-42.

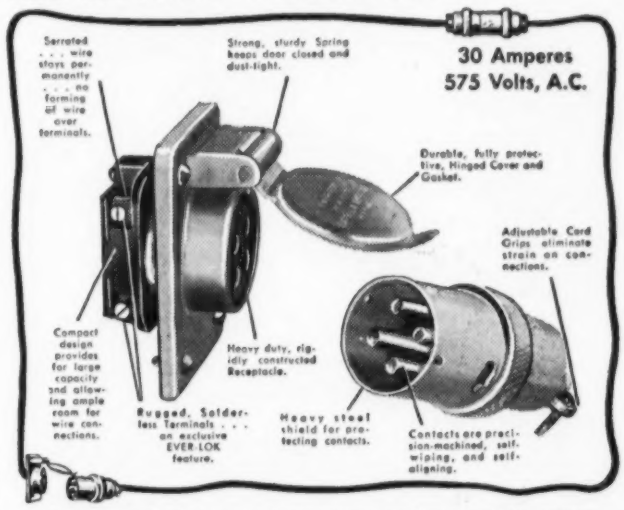
Cummins-Chicago Corp.
DIVISIONS:
Cummins INDUSTRIALS • Cummins Portable Tools
4740 N. Ravenswood Ave. • Chicago 40, Illinois
IN CANADA: 334 Lauder Ave., Toronto

For more details circle NED-4321 on enclosed inquiry slip

EVER-LOK®

RECEPTACLES, PLUGS AND CORD CONNECTORS

...FOR HEAVY-DUTY UTILITY AND INDUSTRIAL APPLICATIONS



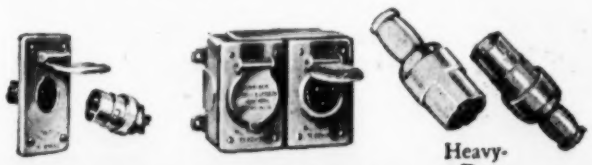
R&S Ever-Lok heavy-duty plugs and receptacles carry full-rated load currents safely and with the greatest of ease under severe operating conditions. Industry and Utilities specify these rugged cord connectors because Ever-Lok has the right combination of features for heavy-duty service applications.

Outstanding Ever-Lok advantage is an automatic locking grip that prevents faulty contacts and accidental disconnection in service. Every Ever-Lok plug grips fast and holds forever despite every tug or pull—yet separates instantly with a finger-tip twist of the powerful bayonet type lock.

Good products need good connections—and Ever-Lok always provides a happy ending to cord connector problems.

Write for Literature E.L.- 15

• R&S Ever-Lok complete lines are available from Midget type 10 amperes to 200 amperes heavy service types . . . standard or reverse service . . . fused and non-fused types.



Midget — 10, 20, 30 Amperes — Heavy-Duty Service

C8 RUSSELL & STOLL COMPANY, INC. • 125 BARCLAY STREET, NEW YORK 7, N. Y.

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

For more details circle NED-4322 on enclosed inquiry slip

Here's another outstanding member of the Taylor Fibre Co. family of laminated plastics. Because of its special high grade cotton paper content, it is unusually free from any foreign matter that might impair its efficiency as an insulator. Tough, with extremely good forming and bending characteristics, Taylor Insulation possesses excellent physical, mechanical and electrical properties. It's readily available, too, in sheets, continuous rolls, and in ribbon rolls for use in automatic machines. For complete information, write for Catalog ND5.

SINCE 1881 Taylor LAMINATED PLASTICS

TAYLOR FIBRE CO.
NORRISTOWN, PA. • LA VERNE, CALIF.
VULCANIZED FIBRE • TAYLOR INSULATION
PHENOL, SILICONE & MELAMINE LAMINATES
FABRICATED PARTS

For more details circle NED-4323 on enclosed inquiry slip

One of the many specific uses of AETNA plywood — rotor blades for the famous Piasecki "HUP" Helicopter now in service with the Navy.

Need Help in Selecting PLYWOOD?

Does your product require some specific characteristic in plywood — perhaps unusual strength, dependable uniformity, light weight, resistance to heat, moisture or acids?

AETNA PLYWOOD & VENEER CO. offers the technical help of their Engineering Staff in all applications of plywood and veneers. These MEN WHO KNOW PLYWOOD have helped industry to a more effective use of plywood by providing up-to-the-minute industrial facts, performance data and design calculations.

Here are 5 reasons why AETNA is the single, most logical source for all your plywood buying:

1 LARGE STOCK on hand, including sizes cut to your specifications.
2 OVER 40 SPECIES—Fir, Gum, Birch, Walnut, etc. in stock 1/16" to 3" thick, 36" x 48" to 48" x 192".
3 MILL SHIPMENTS to your exact requirements.
4 QUICK DELIVERIES from 4 strategically located warehouses—completely stocked.
5 ENGINEERING STAFF to give you solid technical help.

Let AETNA help solve your problems on industrial uses of plywood

★ ★ ★

AETNA PLYWOOD & VENEER CO.
1718 N. Elston Avenue • Chicago 22, Illinois
ARmitage 6-7100
BRANCH WAREHOUSES: Grand Rapids 7, Mich.; Indianapolis 2, Ind.; Rockford, Ill.

AETNA—PLYWOOD for every purpose

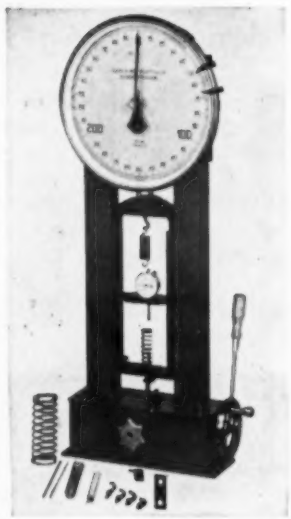
For more details circle NED-4324 on enclosed inquiry slip

HERMETICALLY SEALED RELAY
resists salt spray, humidity, sand

Meeting or bettering provisions of Joint Military Service Specifications for Relays (MIL-R-6106), this general purpose hermetically sealed relay is usable in aircraft, shipboard and portable land-based electrical systems and electronic equipment. It also conforms with Air Force-Navy Aeronautical standard AN-3304. Relay resists all harmful atmospheric conditions, including salt spray, high humidity, sand, fungi and widely varying air pressures. Nitrogen-filled unit operates in its own atmosphere and has advanced armature and magnet design for greater force or pull. Beryllium copper contact fingers do not anneal even after long exposure to high temperatures. Relay is a four-pole, double-throw type with contact rating of 3 amp, 28 v dc or 115 v ac. It can withstand instantaneous voltages surges up to 1500 v without failure. Made by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle NED-4325 on enclosed inquiry slip

SPRING TESTER
capacity load is 300 lb



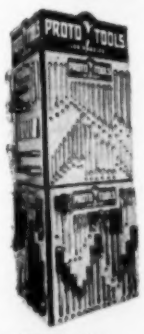
Loads and deflections of compression and extension springs can be checked with Carlson-Chatillon spring tester designed for either general purpose or production testing at 300 to 600 tests per hour. Production stops and tolerance markers are easily adjustable, and accuracy of ¼-per cent is assured to meet requirements of National Bureau of Standards. Extremely accurate dial indicator for reading deflections is available. Steel rules 12 in. long measure lengths in 32nds and 64ths on one side and in decimals in 10ths and 100ths on reverse side. Capacity loads up to 300 lb can be exerted. Springs with up to 4-in. diameters and lengths up to 12 in. for compression and 10 in. for extension can be tested. Made by **Carlson Co.**, 275 Broadway, New York 7, N. Y.

For more details circle NED-4326 on enclosed inquiry slip

DO YOU KNOW? A mathematical computing laboratory has been established for scientific and industrial research and development. Laboratory includes a battery of digital computers having great speed and accuracy. In addition, analog computers are being designed and built. For details write to Battelle Memorial Institute, 505 King Ave., Columbus 1, O.

For more details circle NED-4327 on enclosed inquiry slip

Though Hired for Laughs, They're Sure No Fools ...'cause PROTO means PROfessional TOols!



The PROTO Line Includes Wrenches of All Types, Pliers, Screwdrivers, Punches, Chisels, Sockets & Handles, Pullers, Tool Boxes, Industrial Tools and Many Others.

What are *professional* tools? They are the kind that perform for years, safely and easily... that are made of special alloy steels and scientifically heat treated... that have advanced, tested designs... that are guaranteed. PROTO tools meet these tests because they are designed and manufactured for experts. To build a matched set of *professional* tools, fill your tool needs from your PROTO dealer's complete line. Send 10¢ for 68-page catalog to

PLOMB TOOL COMPANY
2275T Santa Fe Ave., Los Angeles 54
5285

PROTO TOOLS LOS ANGELES

Eastern Factory—Jamestown, N.Y.

For more details circle NED-4328 on enclosed inquiry slip

ACROMARK MEANS "ACCURATE MARKING"

FILL DESIGN AND LETTERING WITH ENAMEL MECHANICALLY

ASK FOR— THE **ACROPRINTER** Reg. U. S. Pat. Off.
MADE IN SEVERAL SIZES
MANUALLY OR POWER OPERATED
CONSTANTLY IMPROVED

The ACROMARK Company

WRITE TO—7-11 MORRELL ST., ELIZABETH 4, N. J.
"THE ORIGINAL MARKING SPECIALISTS"

For more details circle NED-4329 on enclosed inquiry slip

DEPENDABLE ACCURATE CONTROL OF PROCESS EQUIPMENT WITH THE NEW... Bell Switch CONTROL

HERE is help for liquid level control problems. The new Bell Switch Control incorporates a snap-action magnetic proximity switch which is actuated by a float operated magnetic armature. Gives you accurate control and automatic cutoff of such equipment as limit controls, scrubbers, separators and also can furnish high and low stage alarms. Especially suitable for use with highly corrosive fluids. There is virtually no liquid level control problem that can't be solved with this dependable, low maintenance Bell Switch Control. A number of standard and special mounting styles available to meet particular requirements.

- ✓ No Packing Boxes, Bellows or Diaphragms to worry over and replace
- ✓ Rugged Spun Steel Body
- ✓ Eliminates False Action due to Turbulence
- ✓ Standard or Explosion Proof Cover Available
- ✓ Mechanism Completely Isolated from Corrosive Fluids
- ✓ Switch Rating: 10 amps. at 110 volts; 5 amps. at 220 volts, A. C. Direct loads to ¼ h.p. A. C. ratings

WRITE TODAY FOR COMPLETE DESCRIPTIVE LITERATURE

JO-BELL PRODUCTS, INCORPORATED
4840 So. St. Louis Ave. • Chicago 32, Illinois
Liquid Level Controls • Carbonators • Magnetic Switches • Special Controls

For more details circle NED-4330 on enclosed inquiry slip

A Better Strainer! —by DAVIS

—with BOLTED CAP

Bolted cap construction is used in sizes from 1½" to 12".

If you think all strainers are alike, ASK THE MAN WHO HAS TO GET INTO THEM! Davis builds strainers with bolted caps, (instead of threaded caps) because numerous engineers have asked for them. It's easier to remove bolts than to try to unscrew a large thread cap after a strainer has been in use. Also makes possible locating blow-off at lowest point; no sediment pocket. Don't confuse Davis precision-made strainers with ordinary pipe fittings. Available in wide choice of types for steam, air, gas, or fluids. Semi-steel, bronze, or steel bodies; screwed or flanged. Pressures to 1500 p.s.i. Brass, stainless or monel strainer screens. Ask for bulletin 100-A.

DAVIS REGULATOR CO.
2531 So. Washtenaw Ave.
Chicago 8, Illinois

For more details circle NED-4331 on enclosed inquiry slip

FOR VENTILATION, FUME AND DUST CONTROL AIR CONDITIONING

Light, Strong, Flexible

FLEXAUST

SPIRAL-REINFORCED HOSE

Flexaust is suitable for a wide variety of suction and pressure uses in ventilation, dust collection and fume control. **SIZES 1¼ inches to 24 inches.** Write for full information on this all-purpose hose. Various Flexaust types, accessories, and other hose types also available:

BLOFLEX
Non-reinforced collapsible

PORTOVENT
Ring-reinforced retractable

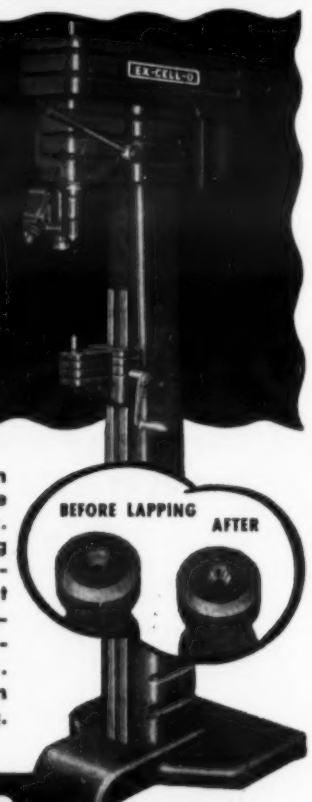
AMERICAN VENTILATING HOSE COMPANY

Dept. N-5, 100 Park Avenue, New York 17, N. Y.

For more details circle NED-4332 on enclosed inquiry slip

For Precision Between Centers

EX-CELL-O CENTER LAPPING MACHINES



Meeting today's precision standards requires accurate center holes in the work. Ex-Cell-O Center Lapping Machines correct inaccuracies of center holes that affect the quality of all subsequent operations performed between centers. Fully described in Bulletin 40271—yours for the asking.

51-11

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

XLO

For more details circle NED-4333 on enclosed inquiry slip

NEVER ABSENT WITHOUT NEED

He has proper hand protection. Jomac Work Gloves help protect the man on this job from painful burns. They'll help keep him on the job, too. Jomac Gloves resist heat and cold, protect against sharp edges. And Jomacs are washable, flexible, reversible and long-wearing. They outlast ordinary gloves 700% or more.

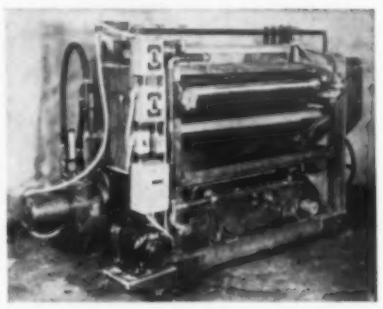
SPECIFY JOMACS FOR BETTER PROTECTION, LONGER WEAR

We guarantee the consistently high quality of Jomac Work Gloves, because cloth and gloves are made by skilled craftsmen in our own plant.

C. WALKER JONES CO.
6135 N. Lambert Street, Philadelphia 38, Pa.

For more details circle NED-4334 on enclosed inquiry slip

COATING MACHINE with heat for applying wide variety of hot coatings



Offered with integral heat for temperatures up to 250° F, this precision coating machine can handle materials up to 120 in. wide at lineal speeds up to 400 fpm. Heat is supplied to the application rolls by means of forced water circulation from the water jacket of the supply tank within the lower frame. Immersion type electric heaters arranged for either single or polyphase electric supply are thermostatically controlled.

Lower supply tank furnishes coating material to the roll reservoirs by means of motor driven pump. Circuit can be arranged for either continuous circulation with gravity return to supply tank or intermittent supply. A variety of applicator roll surfaces and materials are available to apply an accurate coating of material in all coatable viscosities and most consistencies without formula modification. Sizes, sealers, glues, cements, stains, varnishes, lacquers and paints can be applied with no material loss. Cartons can be waxed for water resistance. Machine is also available for steam or gas heat or for water cooling. Made by **Black Brothers Co.,** Dept. RC, Mendota, Ill.

For more details circle NED-4335 on enclosed inquiry slip

THREE-SPEED TURNTABLE clutch allows instant shifting to each speed during operation

A built-in three-speed drive for synchronous speeds of 33.3, 45 and 78.26 rpm, plus clutch for instantaneous shifting to each speed during operation are features of model 530 record turntable.

Accurate timing is assured for "dubbing" operations as well as on-the-air broadcasting and laboratory applications. Turntable attains stable speed in ½-revolution at 33.3 rpm, in 2/3-revolution at 45 rpm and in 1 revolution at 78 rpm. Mechanical and turntable noise, rumble and vibration are practically nonexistent.

Unit weighs 123 lb and measures 24 x 24 x 28 in. high with 16-in. diameter turntable mounted in webbed cast aluminum panel at top of cabinet. A 1/20-hp hysteresis or synchronous type motor is used, and power requirements are 110-120 v 60 cycles standard with power consumption of 120 w. Motors for input requirement of 120 v, 50 or 60 cycles, and 110 v 50 cycles are also available. Made by **Fairchild Recording Equipment Corp.,** Dept. 3 154th St. & Seventh Ave., Whitestone, N. Y.

For more details circle NED-4336 on enclosed inquiry slip

For more details circle NED-4337 on enclosed inquiry slip

Masoneilan No. 11

Pressure Reducing Valve

Sets new standard for accurate regulation!

This better-than-ever Masoneilan No. 11 holds reduced steam pressure settings with complete accuracy and dependability. Superfinished integral pilot valve, housing, and main valve respond instantly to slightest variations in reduced pressure — prevent sticking and corrosion.

Easier to service, too, all parts may be removed and cleaned with the valve in the line. Maintenance consists of *little more than keeping the valve parts clean.*

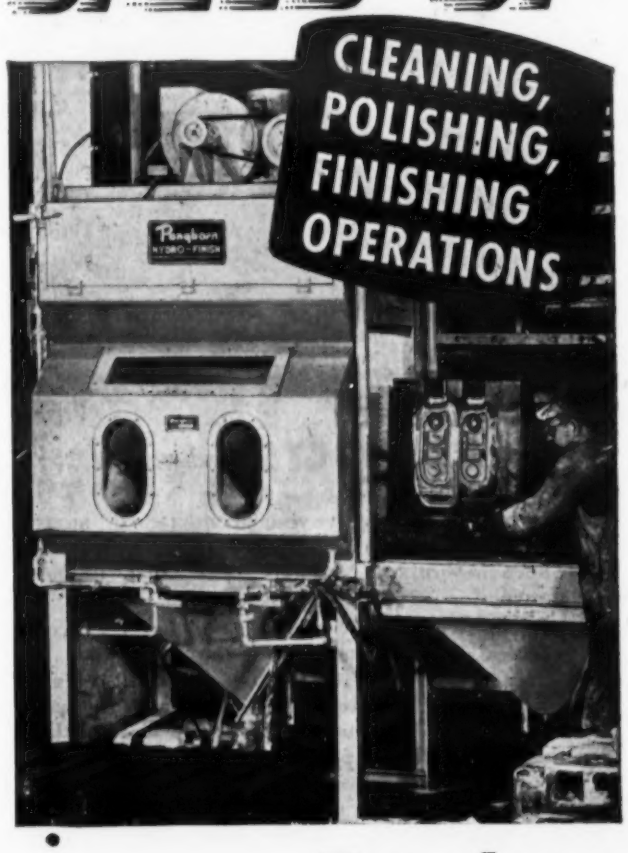
Initial pressures up to 250 lbs. reduced to any desired pressure between 10 and 90 lbs. or 75 and 225 lbs. Sizes ½" to 2" with bronze body. (Also available in iron and steel.)

Call your Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN REGULATOR CO.
1189 Adams Street, Boston 24, Mass.

For more details circle NED-4338 on enclosed inquiry slip

SPEED UP



Pangborn Hydro-Finish is versatile! Use it to speed up cleaning, polishing and finishing of molds and dies as well as production line work.

Hydro-Finish saves you time, labor and money. Scale and discoloration are removed in *minutes* instead of hours. Cleaned surfaces are virtually free of directional grinding lines. Costly hand work is greatly reduced. No danger of excessive metal removal because tolerances are held to .0001". Fine mesh abrasives suspended in water do a precision job.

Find out how Pangborn Hydro-Finish improves product quality, increases tool and die life! For full details, write today for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment.

Pangborn

BLAST CLEANS CHEAPER with the right equipment for every job

For more details circle NED-4339 on enclosed inquiry slip

Chicago RIVET "912"
AUTOMATIC RIVET SETTER
CUTS COSTS 3 WAYS

1 FASTENS FASTER . . . Only the speed of the operator limits the 912's riveting speed. Completely automatic. A push on the foot pedal automatically feeds, inserts and clinches the rivet.

2 DOES WORK OF SEVERAL MACHINES Quick change rotary hopper and raceway makes the 912 adjustable in 5 to 10 minutes to set different size rivets. Adjustable anvil height and 12-inch throat provide further versatility.

3 SAVES ON MAINTENANCE . . . The 912 is massively built to stand the shocks of constant use and is designed for quick, easy servicing and parts replacement.

If your assembly calls for 3/16" steel tubular rivets or smaller, of ¾" lengths or less, ask us to show you how the 912 can cut your fastening costs. Send a sample of your problem assembly (or blueprint) for a free fastening analysis.

FREE CATALOG contains valuable engineering information and rivet specifications plus illustrated descriptions of 26 Chicago Automatic Rivet Setters.

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

For more details circle NED-4340 on enclosed inquiry slip

for adding sales appeal to
OLD PRODUCTS (and new ones, too!)

It may cost LESS to give your product the glamour . . . distinctiveness . . . sales appeal . . . of this rich Sherwin-Williams textured finish, than to use conventional metal finishes!

Kem Art Metal (wrinkle) Finishes are economical because they cover with one coat . . . conceal minor surface imperfections and blemishes . . . often eliminate need of extra operations to remove weld marks, etc. They relieve the monotony of large, plain surfaces . . . add interest and eye appeal to any metal product.

Kem Art Metal Finishes—described in this new Sherwin-Williams Brochure AM-514—are part of the complete line of Sherwin-Williams quality finishes especially designed to meet production line requirements and stocked at your nearby local Sherwin-Williams Branch.

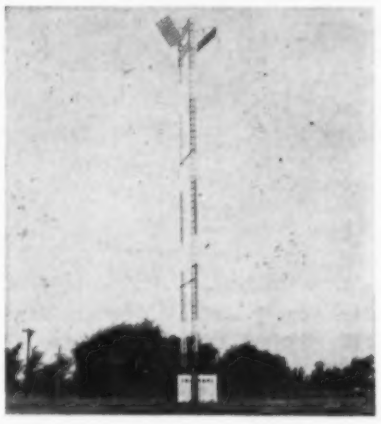
Consult your classified telephone directory—check this handy local source for your industrial product finish needs—or mail the coupon below for copy of this brochure. The Sherwin-Williams Co., General Industrial Division, Cleveland 1, O.

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES

THE SHERWIN-WILLIAMS CO.
General Industrial Division, Cleveland 1, O.
☐ Please send copy of AM-514—"Kem Art Metal Finishes"
☐ Please send information on: _____ (Type of finish)
for _____ (Application)
Name _____
Company _____
Address _____

For more details circle NED-4341 on enclosed inquiry slip

MICROWAVE RELAY EQUIPMENT systems handle up to 24 voice, 400 teletype and 1000 telegraph circuits



Line of multiplexing equipment for industrial microwave radio relay systems provides facilities for up to 24 voice channels, more than 400 teletype or telemetering operations and nearly 1000 remote telegraph circuits. Equipment, which features double frequency modulation sub-carrier type multiplexing, incorporates same principles as 10 and 12-channel systems previously supplied, and operates in 6575-6875 megacycle band. It is available in remote type installation for already established radio and power facilities and micropackage for complete package installation.

For the former, equipment is installed in outdoor weatherproof housings with paraboloid reflector-antennas mounted on top. Micropackage installations are enclosed in standard concrete block house with antennas mounted on roof above equipment inside. System and equipment is particularly suited for pipeline, power company, railroad, land transportation, forestry and similar cross-country applications requiring large number of communications channels. Made by **Motorola Inc.**, Communications & Electronics Div., 4501 W. Augusta Blvd., Chicago 51, Ill.

For more details circle NED-4342 on enclosed inquiry slip

SMALL PARTS CLEANING MACHINE motor drive has reversing action

Aviation, time clock, meter, radio, television, typewriter, bearing and screw machine parts, as well as all electrical and mechanical machine parts can be cleaned with Instro-Met cleaning machine. Features include three clear-view windows on motor support for checking during operation, 4-gal capacity spun aluminum tanks and covers and heavy cast aluminum basket with three Monel mesh removable compartments for cleaning variety of parts simultaneously. Basket snaps on to impeller shaft, eliminating accidental loosening. Other advantages are 14-to-1 gear reduction ball bearing alternating or direct current motor with reversing action, motor-driven unit for fast drying and heavy aluminum base for steady, smooth performance. Cleaner can also accommodate new-type parking meters without disassembling entire train. It is finished in lustrous black crackle, and all metal parts are mirror polished or plated. Made by **Zenith Mfg. & Chemical Corp.**, Dept. N, 52 Beekman St., New York 38, N. Y.

For more details circle NED-4343 on enclosed inquiry slip

Over 85% of the torque wrenches used in industry are
Sturtevant TORQUE WRENCHES
Read by Sight, Sound or Feel
- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

in inch ounces
...inch pounds
...foot pounds
All sizes from 0-6000 ft. lbs.

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

For more details circle NED-4344 on enclosed inquiry slip

CLOTH BAG DUST FILTERS for individual machines

These complete, compact Sly "Unit" Dust Filters offer many economies in limited capacity ranges for the purpose of collecting dust from grinding, sanding, screening, mixing, pulverizing, packaging and finishing operations.

Often several of these units are employed in preference to a single large collector, for greater flexibility of operation, to save piping, and to keep different materials separate.

When you choose your dust collector be sure to get plenty of cloth for the air volume to be filtered. Never install a collector with less than a square foot of cloth for each four cubic feet of dust-laden air. Buy Sly—be safe.

Sly "Unit" Filters are engineered to assure long-time operating efficiency. Low cost, compact, easy to install. Made by **The W. W. Sly Manufacturing Co.**, 4748 Train Avenue, Cleveland 2, Ohio. There are experienced Sly engineers in New York, Chicago, Philadelphia, Syracuse, Detroit, Buffalo, Cincinnati, St. Louis, Indianapolis, Birmingham, Los Angeles, Toronto. Advt.

For more details circle NED-4345 on enclosed inquiry slip

Use the BARBER COLMAN Impressor

on ALUMINUM COPPER BRASS BRONZE and PLASTICS

for Fast and Efficient HARDNESS TESTING

Works on the principle of forcing a hardened, spring-loaded steel point into the surface, the amount of penetration registering instantly on a dial indicator to give a dependable measure of hardness. Operator simply places Impressor on surface and presses down firmly. Can be used in any position, even against edges or ends of pieces when stacked. Requires little effort, ideal for women inspectors. Strongly built for durability and consistent accuracy. Thousands in use. Write for Bulletin F-1689-1.

Comes in velvet-lined, fitted wood case with two extra points and full maintenance instructions.

BARBER-COLMAN COMPANY
1206 ROCK STREET
ROCKFORD, ILLINOIS

For more details circle NED-4346 on enclosed inquiry slip

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES
CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

WATERLOO METAL BOXES AND CHESTS

Waterloo
VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

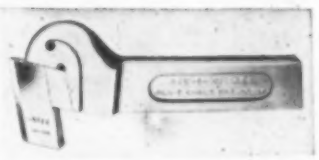
For more details circle NED-4347 on enclosed inquiry slip

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works, 22 Hancock St., Quincy, Mass.** *Advt.*

▲ For more details circle **NED-4348** on enclosed inquiry slip ▲

SPRING TOOL HOLDER
permits threading close to shoulder



Because no fitting to gage is necessary when grinding and no adjustment is needed in the tool post after grinding, Red-E Willard spring tool holder saves valuable operation time. Tool holder permits threading close to a shoulder and produces smooth, accurate threads. A wrench and hardened high speed steel cutter is furnished with the holder. Made by **Ready Tool Co.,** 554-D Iranistan Ave., Bridgeport 5, Conn.

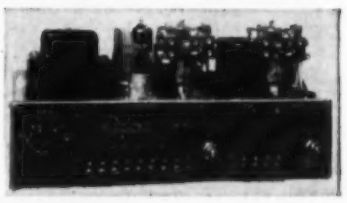
▲ For more details circle **NED-4351** on enclosed inquiry slip ▲

RADIOACTIVITY DETECTOR KIT
portable unit is battery operated

Knight Super Scout radioactivity detector in kit form is easily assembled in short time by any person who is mechanically inclined. The sensitive portable Geiger counter detects the presence of gamma rays, medium to high energy beta rays and cosmic and X-rays, in addition to spotting radiation from radioactive sources. Clicks heard in headphones and flashes of a neon bulb increase in frequency as radioactive source is approached. Power is obtained from built-in vibrator power supply operating from two standard flashlight batteries. The 3-lb detector has belt clip for carrying. Any 2000-ohm headphones can be used for audible detection. Made by **Allied Radio Corp.,** Dept. N-D, 833 W. Jackson Blvd., Chicago 7, Ill.

▲ For more details circle **NED-4352** on enclosed inquiry slip ▲

CONTROL RELAY
electronic unit simplifies control



Operated in conjunction with differential transformer transmitter, this electronic control relay is applicable to pressure, force, motion, flow and similar variables. To obtain control of any variable, transformer is adjusted so that its zero position is at exact point at which control is desired. This position is sensitive to less than 0.0001-in. As armature of transformer is moved off this null point by change in variable, a signal is generated having amplitude and phase definition. Relay is sensitive to this minute signal and either pulls in or drops out, depending upon direction of signal. Relay can be installed up to 5000 ft from source of measured variable and is unaffected by normal line voltage variation. Made by **Automatic Temperature Control Co.,** 5206 Pulaski Ave., Philadelphia 44, Pa.

▲ For more details circle **NED-4353** on enclosed inquiry slip ▲

ENGRAVE
PANELS OF ANY DIMENSIONS
IN YOUR OWN SHOP
with the Engravograph

The only portable machine which reproduces 15 sizes from one master alphabet.

The only one with adjustable copy holding slides for multi-line engraving in one set-up.

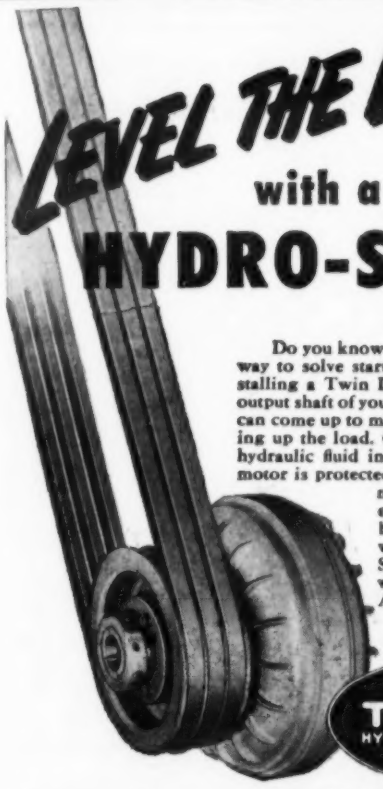
Self-centering holding vise for nameplates.

Send for Booklets
I-S—26 portable model • H—26 heavy duty model

NEW HERMES, Inc. 13-19 University Place, N.Y. 3
In Canada: 359 St. James St., Montreal
World's Largest Manufacturer of Portable Engraving Machines

▲ For more details circle **NED-4355** on enclosed inquiry slip ▲

LEVEL THE LOAD
with a TWIN DISC HYDRO-SHEAVE®



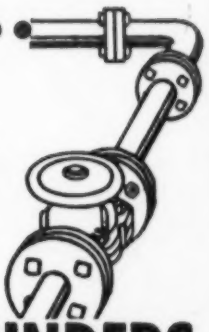
Do you know the simple and inexpensive way to solve starting load problems? By installing a Twin Disc HYDRO-SHEAVE on the output shaft of your electric motor. The motor can come up to maximum torque before picking up the load. Overloads merely cause the hydraulic fluid in the coupling to slip. The motor is protected. Another result is less demand current, sometimes even a smaller motor to do a bigger job. Level the load with a Twin Disc HYDRO-SHEAVE Drive and save money while you save machinery. Ask for Bulletin No. 145-B.

TWIN DISC HYDRO-SHEAVE DRIVES

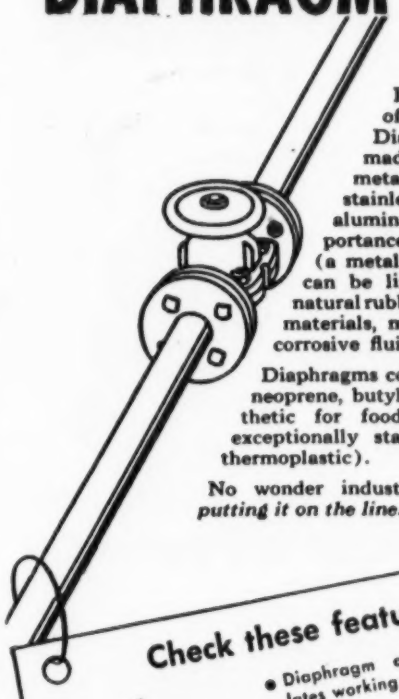
TWIN DISC CLUTCH COMPANY, Racine, Wisconsin · HYDRAULIC DIVISION Rockford, Illinois
BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

▲ For more details circle **NED-4349** on enclosed inquiry slip ▲

PUTTING IT ON THE LINE...
in Industry after Industry!



the GRINNELL-SAUNDERS DIAPHRAGM VALVE

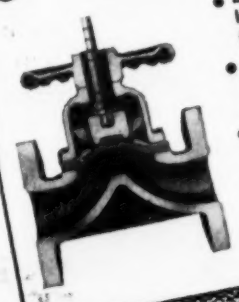


Here's why . . . bodies of Grinnell-Saunders Diaphragm Valves are made in a variety of metals — including iron, stainless steel, bronze and aluminum. But of more importance . . . a body of cast iron (a metal not in short supply) can be lined with glass, lead, natural rubber, neoprene and other materials, many of which handle corrosive fluids *better* than metal.

Diaphragms come in natural rubber, neoprene, butyl, hycar, a special synthetic for foods, and KEL-F (an exceptionally stable, chemically inert thermoplastic).

No wonder industry after industry is *putting it on the line.*

Check these features . . .



- Diaphragm absolutely isolates working parts from the fluid.
- Diaphragm lifts high for streamline flow in either direction.
- Diaphragm presses tight for positive closure.
- Body, lining and diaphragm materials to suit service.
- Simple maintenance — diaphragm easily replaces.

GRINNELL
WHENEVER PIPING IS INVOLVED
Grinnell Company, Inc., Executive Offices, Providence, Rhode Island
Sales Offices and Warehouses in Principal Cities

▲ For more details circle **NED-4356** on enclosed inquiry slip ▲

EASY-WELDING
THE PROBLEM METALS

ALUMINUM
STAINLESS STEELS
NICKEL ALLOYS

Here's the story of Heliwelding — Airco's inert-gas arc-welding process. Its special characteristics — freedom from oxidation — pin-point heat concentration — give it a definite role in the family of arc welding methods.

When you're faced with welding thin sections of the problem metals — stainless steel, aluminum, brass, copper, everdur, nickel, inconel, or monel, it will pay to know all about Airco's Heliwelding Process.

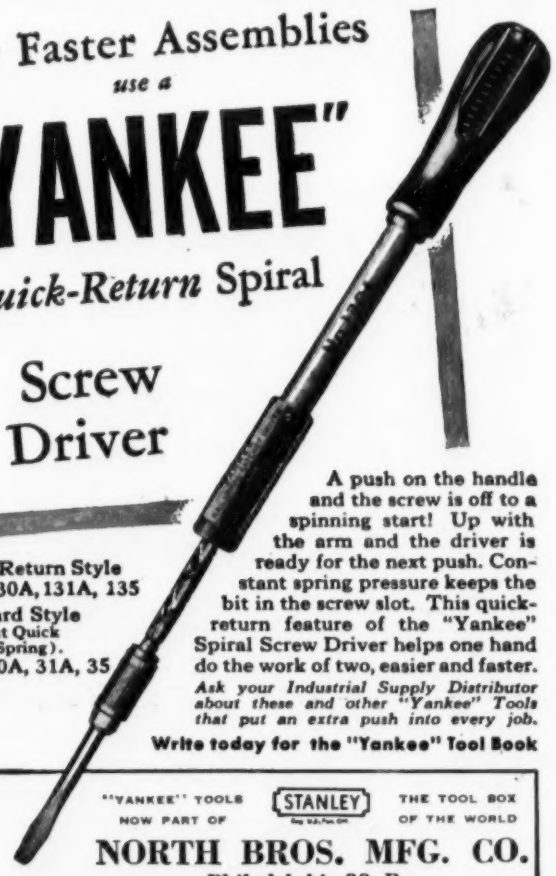
To get your copy of Catalog 9, Heliwelding, just write in today on your letterhead: Address: Advertising Department, Air Reduction Sales Company, 60 East 42nd Street, New York 17, N. Y.

AT THE FRONTIERS OF PROGRESS YOU'LL FIND AN AIR REDUCTION PRODUCT

AIR REDUCTION
AIRCO
AIR REDUCTION SALES COMPANY • AIR REDUCTION MAGNOLIA COMPANY
AIR REDUCTION PACIFIC COMPANY
REPRESENTED INTERNATIONALLY BY AIRCO INTERNATIONAL
Divisions of Air Reduction Company, Incorporated
Dealers and Offices in Principal Cities

▲ For more details circle **NED-4350** on enclosed inquiry slip ▲

For Faster Assemblies
use a
"YANKEE"
Quick-Return Spiral
Screw Driver



Quick-Return Style
Nos. 130A, 131A, 135
Standard Style
(without Quick Return Spring).
Nos. 30A, 31A, 35

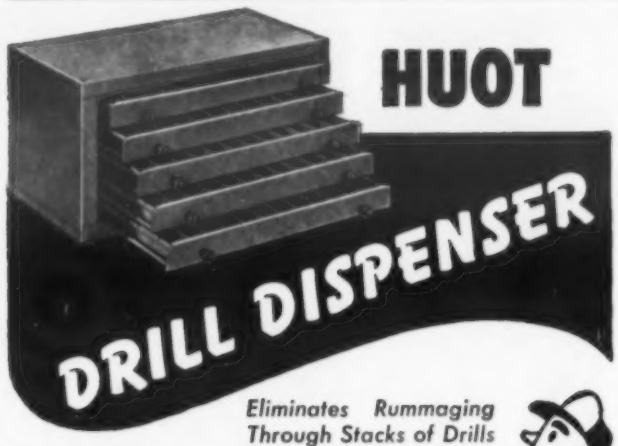
A push on the handle and the screw is off to a spinning start! Up with the arm and the driver is ready for the next push. Constant spring pressure keeps the bit in the screw slot. This quick-return feature of the "Yankee" Spiral Screw Driver helps one hand do the work of two, easier and faster.

Ask your Industrial Supply Distributor about these and other "Yankee" Tools that put an extra push into every job.

Write today for the "Yankee" Tool Book

"YANKEE" TOOLS NOW PART OF STANLEY THE TOOL BOX OF THE WORLD
NORTH BROS. MFG. CO.
Philadelphia 33, Pa.

▲ For more details circle **NED-4354** on enclosed inquiry slip ▲



HUOT DRILL DISPENSER

Eliminates Rummaging Through Stacks of Drills

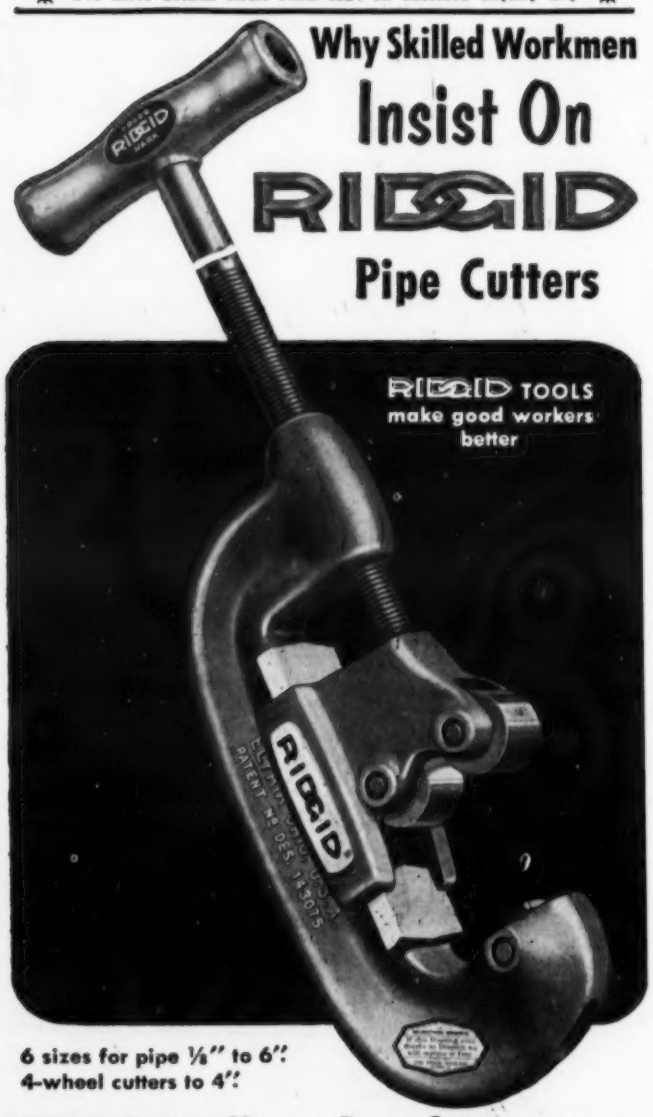
No more running out of drills—your entire stock can be seen at a glance. Each size of drill has its own compartment with rounded bottom for easy selection. You can store dozens of small drills and several large ones in their own compartments. Built-in pricing or inventory system eliminates the need for cost sheets, and will keep a record of drills on hand. Stack two or three cabinets to save sace. *Specifications:* 14½" long, 7¼" high, 7¼" deep. Hammerlin baked enamel finish over rugged steel.

Made in three models for fractional, number or letter drills.
Write for Circular

By the makers of **HUOT DRILL INDEX**

HUOT MANUFACTURING CO.
HUOT is Pronounced "HEW-IT"
571 No. Wheeler St., St. Paul W4, Minn.

▲ For more details circle **NED-4357** on enclosed inquiry slip ▲



Why Skilled Workmen Insist On RIDGID Pipe Cutters

6 sizes for pipe ⅛" to 6".
4-wheel cutters to 4".

RIDGID Heavy-Duty Cutters assure you extra quick easy pipe cutting

★ High alloy thin-blade cutter wheels roll quickly through pipe with least effort—clean almost burrless cuts.

★ Special malleable housing guaranteed warp-proof, assures perfect tracking of cutter wheel—every tool factory tested.

★ Efficiency-balanced design for quick easy work—made for long hard service.

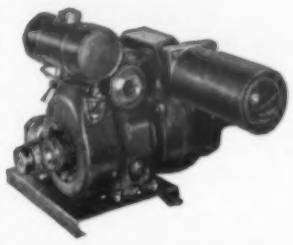
★ Order from your Supply House.

THE RIDGE TOOL COMPANY · ELYRIA, OHIO

RIDGID Work-Saver Pipe Tools

▲ For more details circle **NED-4358** on enclosed inquiry slip ▲

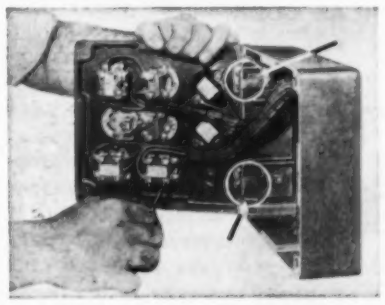
OIL BURNER driven by gasoline engine



Driven by a 1.5 hp gasoline engine, this oil burner has a capacity range of 0.8 to 2.5 gal per hour. No outside source of electrical energy is required. The gasoline engine drives the fuel pump and fan, while the engine-driven magneto generator, assembled as part of the unit, supplies the power for ignition. Made by **Wayne Home Equipment Co.**, 805 Glasgow, Ft. Wayne 4, Ind.

▲ For more details circle **NED-4359** on enclosed inquiry slip ▲

OILTIGHT CONTROL STATION made in 6, 9, 12 and 16-unit sizes



Designed especially for machine tool service, this oiltight control station has composition gasket and internal sliding hinged cover to facilitate wiring and maintenance. Control unit is available in 6, 9, 12 and 16-unit sizes. Cast boxes are provided with bosses for conduit entry at convenient points. A complete line of individual oiltight controls including push-buttons, selector switches, selector pushbuttons, pilot lights, attachments and accessories is available for mounting in these enclosures. Units and enclosures are available separately or assembled to customer's specifications. Made by **Square D Co.**, 4045 N. Richards St., Milwaukee 12, Wis.

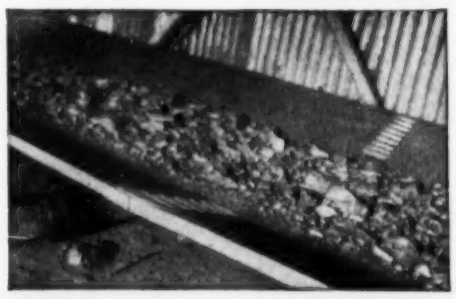
▲ For more details circle **NED-4360** on enclosed inquiry slip ▲

WELDER'S TRUCK for acetylene welding equipment

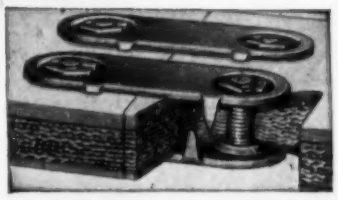
Capable of accommodating one gas and one air cylinder, this acetylene gas welding equipment truck is made of angle iron and sheet metal, with heavy tubular handles. Each gas cylinder is cradled, preventing rolling or turning when truck is moved. A safety chain anchors cylinders in position. Torches, tips and accessories can be placed in tool box located between the handles. Because truck is of swivel type, it is always in a level position. Torch hanger can be mounted on handle cross bar. Overall height is 48 in., width is 29 in. and weight is 125 lb. Made by **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

▲ For more details circle **NED-4361** on enclosed inquiry slip ▲

FLEXCO® BELT FASTENERS and RIP PLATES



FOR HEAVY CONVEYOR AND ELEVATOR BELTS OF ANY WIDTH



Compression Grip distributes strain over whole plate area

★ FLEXCO Fasteners make tight butt joints of great strength and durability.
★ Trough naturally, operate smoothly through take-up pulleys.
★ Distribute strain uniformly.
★ Made of Steel, "Monel," "Everdur." Also "Promal" top plates.
★ FLEXCO Rip Plates are for bridging soft spots and FLEXCO Fasteners for patching or joining clean straight rips.

Order From Your Supply House. Ask for Bulletin F-100

FLEXIBLE STEEL LACING CO.
4664 Lexington St., Chicago 44, Ill.

▲ For more details circle **NED-4362** on enclosed inquiry slip ▲

FABRICS & TAPES For ALL INDUSTRY

FLIGHTEX FLIGHTEX FABRIC FABRICS

- COTTON
- VINYON
- RAYON
- NYLON
- GLASS

If you use special industrial fabrics and mechanical tapes, you'll find Flightex a dependable source of supply. Our staff of engineers is at your service to help solve your fabric and tape problems.

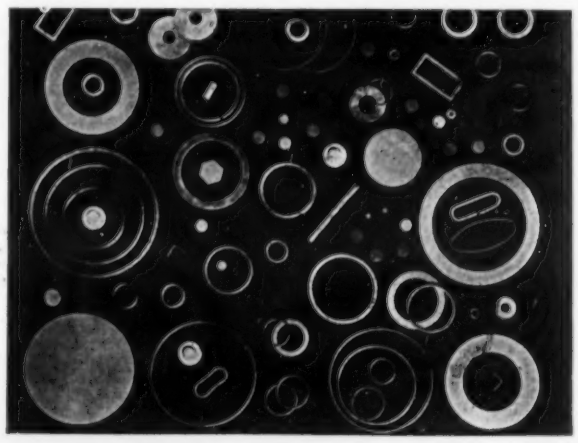
Write for Complete Information

FLIGHTEX FABRICS, Inc.
91 Worth Street New York 13, N. Y.

▲ For more details circle **NED-4363** on enclosed inquiry slip ▲

KRE-CO PREPLACED BRAZING ALLOYS LOWER JOINING COSTS

For speedier production and leak-tight joints stronger than the parent metal. Made from Easy-Flo, Sil Fos, Copper, Phos Copper, Bronze, Soft Solder and Aluminum in rings, disks, flat washers, stampings, and special shapes and sizes to meet all requirements. Speedy deliveries in any quantity. Interesting quotations. Tell us to present facts and figures to lower your brazing costs.



CHARLES W. KRIEG COMPANY
48-60 Dickerson St. - HUmboldt 5-2000 - Newark 4, New Jersey

▲ For more details circle **NED-4364** on enclosed inquiry slip ▲

RAPIDUCTION

A wide variety of internal and external chuck work can be handled with speed and accuracy on the Oster No. 601 "RAPIDUCTION" lathe. You get this machine as you want it: with WORM DRIVE (for power to make heavy forming cuts) or with DIRECT DRIVE (for high spindle speeds on small diameters and on non-ferrous metals); with 4-speed motor or with 2-speed motor; with automatically indexed, 6-position turret or with plain saddle and single tool post. Automatic chuck capacity 1½" round bar. Swing over bed 14". Over cross slide 6½". Write for No. 601 "RAPIDUCTION" catalog.

OSTER **THE OSTER MFG. COMPANY**
2066 E. 61st St., CLEVELAND 3, OHIO, U.S.A.

▲ For more details circle **NED-4365** on enclosed inquiry slip ▲

IT'S TIME TO ACT FAST!

Reach Anyone Instantly

Boost Output

Cut Costs

SAVE TIME WITH ELECTRONIC AMPLICALL INTERCOMMUNICATION

Gear up *now* for bigger output and increased efficiency. AMPLICALL provides 2-second speech contact between all departments for fast relay of orders and information. Stops wasteful walking and waiting—keeps plant and office personnel on the job every working minute—takes the load off busy switchboards. AMPLICALL *gets more work done for every operations dollar spent*—pays for itself quickly. Get the full details *today*.

SEE YOUR CLASSIFIED PHONE BOOK under "Intercommunication" for your AMPLICALL specialist, or write us direct

Electroneering is our business

SOUND EQUIPMENT — Rauland — INTER-COMMUNICATION

RAULAND-BORG CORPORATION • 3523-D ADDISON ST., CHICAGO 18, ILL.

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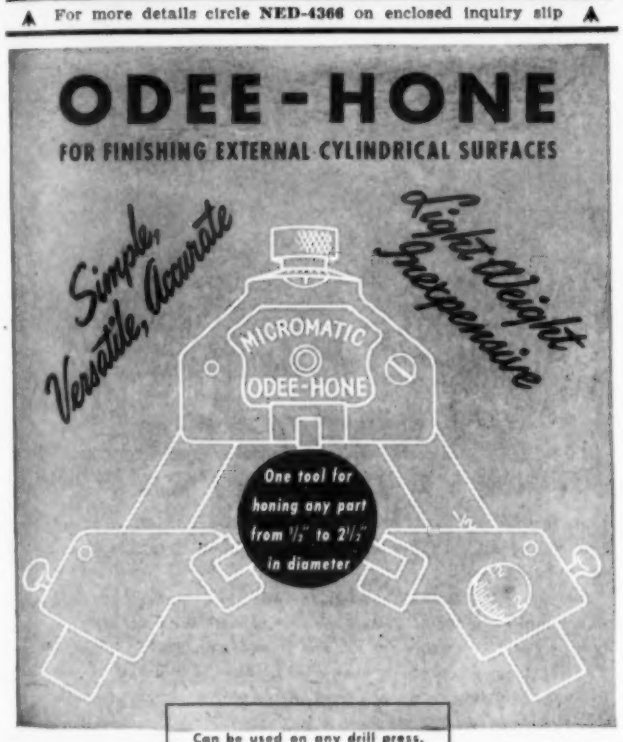
ODEE-HONE

FOR FINISHING EXTERNAL CYLINDRICAL SURFACES



Can be used on any drill press, lathe or electric drill.

Generates round, straight surfaces with any desired surface finish.

For complete information write or call

MICROMATIC HONE CORPORATION

8100 SCHOOLCRAFT • • • DETROIT 4, MICHIGAN

▲ For more details circle **NED-4367** on enclosed inquiry slip ▲

Special cold headed products

. . . nails • rivets • screws . . . made to order

. . . and to your specifications in any metal. Large raw material inventory for your convenience. Send drawing—advise quantity. *Free catalog on request.*

JOHN HASSALL INC.

398 Oakland Street, Brooklyn 22, New York

▲ For more details circle **NED-4368** on enclosed inquiry slip ▲

SOLDERING GUN heats in 3 to 5 seconds

Pressing the trigger of this soldering gun causes this "quick-hot" transformer type device to heat in 3 to 5 seconds. It cools when the trigger is released. A built-in spotlight illuminates the work and a long replaceable tip reaches spots otherwise inaccessible. Light in weight, tool has cool handle and case and is balanced for ease in use. It can also be used for heating liquids and for wood or leather burning. Rated at 250 w, gun operates on 110/120 v ac. Made by **Wen Products, Inc.**, 5808 Northwest Highway, Chicago 31, Ill.

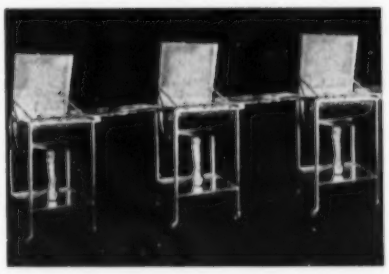
▲ For more details circle **NED-4369** on enclosed inquiry slip ▲

SOFT PLASTIC MALLETS with head weights of 1 to 14 oz

Seven models comprising line of soft plastic mallets have head weights varying from 1 to 14 oz, head diameters from ¾ to 2 in. and head lengths from 2¾ to 4 in. Made of tough, yet resilient cellulose plastic, heads can be refaced with file or grinding wheel, or shaped to meet special requirements. Steel locking pin holds head securely to hickory handle. Made by **Matticks Mfg. Co.**, Dept. A, 4156 E. Pacific Way, Los Angeles 23, Calif.

▲ For more details circle **NED-4370** on enclosed inquiry slip ▲

FLAW DETECTION PROCESS reveals even microscopic size flaws



Microscopic cracks, pores and cold shuts can be detected by Met-L-Chek penetrant dye inspection process for ferrous and nonferrous parts, ceramics, glass and thermosetting plastics. Process, which requires only two solutions, dye and developer, allows mass visual inspection of parts under normal shop conditions. Parts are first dipped in highly penetrant red dye solution for about 3 minutes, then surface washed in water to leave dye only in cracks and pores. Parts are then dipped in white developer solution which dries quickly, leaving a white coating. This coating sucks dye out of cracks in blotting action, and dye spreads out leaving vivid red stain many times wider than flaw. Illustrated is typical dip-tank installation. Developed by **Met-L-Chek Co.**, 21-D N. Prairie Ave., Hawthorne, Calif.

▲ For more details circle **NED-4371** on enclosed inquiry slip ▲

WHICH WATER HOSE WORKS BEST FOR YOU???

● Republic's Fairway Brand has a smooth tan cover. Champion is yellow. The one can be used in long continuous lines without couplings. The other is better around certain abrasive influences. Which would you select?

With due respect for your ability, we suggest you don't make the choice. Proper application of any Industrial Rubber Product is a job for an expert.

No one hose can possibly satisfy every job requirement without sacrificing ultimate performance. Contact your local Republic Distributor or write direct for a free analysis of your specific requirements.

Do it now and you'll be certain you're getting maximum performance at minimum cost.

INDUSTRIAL RUBBER PRODUCTS BY

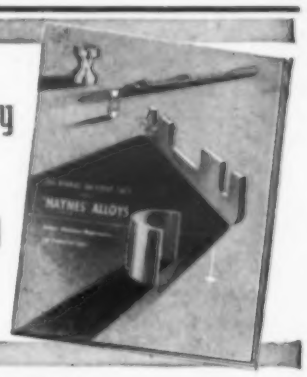
REPUBLIC RUBBER DIVISION

Lee Rubber & Tire Corporation

YOUNGSTOWN, OHIO

▲ For more details circle **NED-4372** on enclosed inquiry slip ▲

How HAYNES Alloy Trade-Mark MACHINERY PARTS Reduce Machinery Maintenance . . .



★ 23 PAGES ★ 61 ILLUSTRATIONS

Get your copy of this new booklet describing long-wearing HAYNES alloy machinery parts. It describes over 30 types of cast and wrought alloy parts with unusually high resistance to corrosion, abrasion, or heat.

HAYNES alloy machinery parts have already made large savings on down time and machinery maintenance for countless manufacturers.

For a copy of the booklet describing the parts, write to our General Offices.

Haynes Stellite Company

A Division of Union Carbide and Carbon Corporation

UCC

General Offices and Plant: Kokomo, Indiana

"Haynes" is a trade-mark of Union Carbide and Carbon Corporation.

▲ For more details circle **NED-4373** on enclosed inquiry slip ▲

Look! It's Really Portable—

RIDGID

"400" POWER DRIVE

On Wheels!

Wheel legs and front handles available to convert your present "400" to wheel model; or legs and tray to make bench model into stand.

Power for hand threaders, cutters, reamers now easily rolled where you need it!

★ *One man* can easily wheel-barrow this popular RIDGID power unit close to the work—think of the time and muscle saving!

★ And it stands still and delivers plenty of power—universal motor, forward, reverse, ⅛" to 2"—to 12" with geared tools.

★ RIDGID design 3-jaw chuck, 6 adjusting pinions, one always handy; self-centering workholder in rear.

★ Sealed-in lubrication—no oil to spill.

★ See it, compare it—buy the unequalled "400" at your Supply House!

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID Work-Saver Pipe Tools

▲ For more details circle **NED-4374** on enclosed inquiry slip ▲

air is expensive

IN THE WRONG PLACE

Air mixed with the steam in your heaters or coils is expensive because it retards heat transfer and lowers steam temperature. Remove air from steam heated machines with ***Sarco thermostatic air vents.*** Write for Bulletin 276 and the name of the Sarco man nearest you. He can help you select the best vent for your purpose and the right place to install it.

Represented in Principal Cities 502

sarco

SARCO COMPANY, INC.
Empire State Building, New York 1, N. Y.
Sarco Canada, Ltd., Toronto 5, Ontario

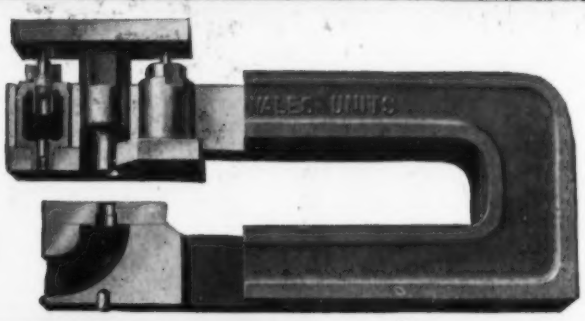
For more details circle NED-4375 on enclosed inquiry slip

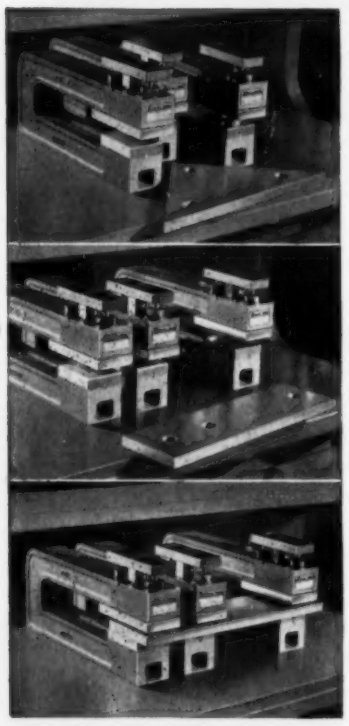
Announcing

WALES HYDRA-STRIP UNITS

for

punching round or shaped holes in material up to 3/4" thick





Above cutaway view of Wales Hydra-Strip Hole Punching Unit shows 2 Wales Hydra-Springs (one on each side of the punch). The Hydra-Spring at left of the punch is a cross-section view.

Showing a template set-up of Wales Hydra-Strip Hole Punching Units in a press brake.

A straight line setup of Wales Hydra-Strip Units with 3/4" thick punched work in foreground.

Showing setup of Wales Hydra-Strip Hole Punching Units with work on top of dies ready to be punched.

A major *PROBLEM* in perforating sheet metal has been the stripping of thick material . . . not the punching. Wales Hydra-Springs *solve* this age old problem by providing many times more stripping pressure than mechanical springs of the same volume.

These *revolutionary* springs permit compact, self-contained, independent Wales Hole Punching Units to punch and *strip* material up to ¾" thick.

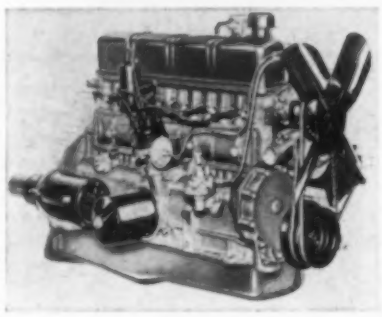
Such *outstanding performance* is the result of utilizing the compressibility of special fluids. Wales Hydra-Spring loads may be changed by a simple adjustment to increase or decrease the volume of fluid.

This is too big a story to tell in this space so WRITE TODAY for complete information on Wales Hydra-Strip Hole Punching Units.

WALES-STRIPPIT CORPORATION
George F. Wales, *Chairman*
363 Payne Avenue, North Tonawanda, N. Y.
(Between Buffalo and Niagara Falls)
Wales-Strippit of Canada Ltd., Hamilton, Ontario
Specialists in Punching and Notching Equipment

For more details circle NED-4376 on enclosed inquiry slip

HEAVY-DUTY INDUSTRIAL ENGINES available in two V-8 and one 6-cylinder in-line type models

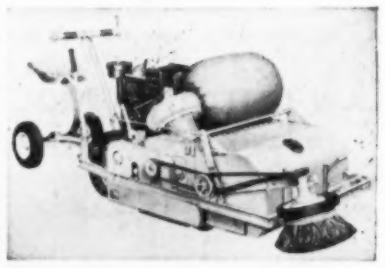


Three heavy-duty high compression engines built for industrial applications and equipped with overhead valves are available in two V-8 and one 6-cylinder in-line type models. The 317 is rated at 140 brake hp at 2800 rpm, and is a V-8 with 3.8-in. bore and 3.5-in. stroke. The 279 is rated 125 brake hp at 2800 rpm, is also a V-8 and has 3.56-in. bore and 3.5-in. stroke. Finally, the 6-cylinder in-line 215 (illustrated) is rated 93 brake hp at 2800 rpm and has 3.56-in. bore and 3.6-in. stroke. Numbers identifying each engine correspond to its displacement in cubic inches.

Cylinders are cast en bloc of high grade iron, and free-turn valves are high chrome nickel alloy. All engines have replaceable thin shell precision copper-leaded bearings, and oil system has full-flow filter with renewable element. Full-length water jackets completely surround each cylinder. Also offered is the Multa-Torque converter usable with the 215 which offers fluid coupling plus torque multiplication and is designed to absorb shock overloads and prevent stalling under excess loads. Made by **Ford Motor Co.**, Tractor & Industrial Engine Div., 3000 Schaefer Rd., Dearborn, Mich.

For more details circle NED-4377 on enclosed inquiry slip

INDUSTRIAL FLOOR SWEEPER picks up dirt, nails and refuse with triple-action operation



Dual brushes arranged in tandem, together with vacuum dust control provides triple-action sweeping principle in this Commander Moto-Sweeper designed to clean most factory, warehouse or garage floors as well as docks, ramps and sidewalks. Front brush rotates in clockwise direction and throws heavier debris upward in path of rear brush turning in counter-clockwise direction. Latter deposits dirt in hopper, so that none of the refuse is thrown forward and underneath. Dust in turn is drawn on upward and is pocketed by powerful vacuum system.

Heavy duty fiber bristle brushes will pick up dirt, nails and refuse of all kinds. Automatic power steering is accomplished by separate clutch on each wheel and is operated by levers on handle bar. A sulky with footbrake and side brush for cleaning along walls are optional. Sweeper is 34¼ in. wide and has capacity of 35,000 to 40,000 sq ft per hour. Power is supplied by air-cooled gasoline engine. Made by **Moto-Mower Co.**, Moto-Sweeper Div., 4590 Woodward Ave., Detroit 1, Mich.

For more details circle NED-4378 on enclosed inquiry slip

PREVENTIVE MAINTENANCE

eliminates truck downtime

READY-POWER IS *BEST* FOR PREVENTIVE MAINTENANCE

Tie up a truck because of power failure? Never! Equip your fleet with *interchangeable* Ready-Power gas-electric units and, then, have one extra for the shop. Thus, power units can be rotated for preventive maintenance . . . and your trucks stay *ON THE JOB.*

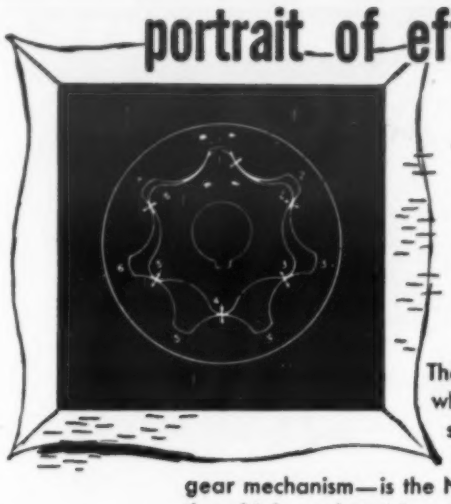
Your Truck Is No Better Than Its Power!

CONTINUOUS-DUTY POWER UNITS

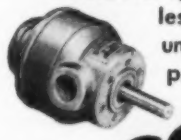
The READY-POWER Co.
3832 Grand River Ave., Detroit 8, Michigan
Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

For more details circle NED-4379 on enclosed inquiry slip

portrait of efficiency



The unique device whose likeness you see here — the famed Gerotor gear mechanism—is the No. 1 reason for the high volumetric and mechanical efficiency of Gerotor Hydraulic Pumps. Revolving in the same direction at low relative speed, the two Gerotors wear less—last longer—assure more uniform flow. Pressures to 1200 p.s.i. continuous, 1500 intermittent.



GEROTOR hydraulic pumps

GEROTOR MAY CORPORATION, Baltimore 3, Md.

For more details circle NED-4380 on enclosed inquiry slip

Here is **PROTECTION**

FOR SMALL MOTORS and ELECTRICAL EQUIPMENT

FIREGUARD FUSE COUPLING

You can protect all types of electrical equipment, delicate electrical instruments and machines with FIREGUARD—the sensational new fuse coupling.

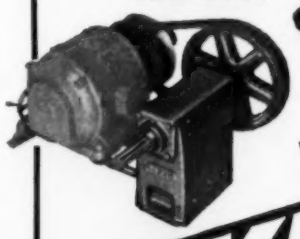
The use of FIREGUARD reduces the number of motor burn-outs on original equipment . . . cuts the cost of service or replacement by protecting the equipment . . . and provides an EXTRA SELLING FEATURE for your product when FIREGUARD is attached to the original equipment before shipping. Takes only a second to attach FIREGUARD to product.

Write today for complete information on this money-saving, time-saving, low cost fuse coupling. State size of motor, or wattage, and any other information about your equipment that will enable us to give you the greatest possible technical help.

F. H. SMITH MFG. CO.
NATIONAL SALES OFFICE
3634 S. BLAKE ST., CHICAGO 9, ILL.

For more details circle NED-4381 on enclosed inquiry slip

LOW-COST



FINGERTIP SPEED CONTROL

with

LOVEJOY variable SPEED PULLEYS

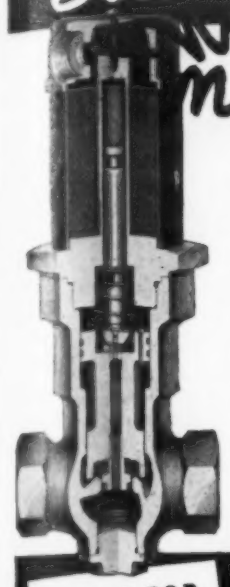
Speed up or slow down equipment while machines are running—make material or production changes without losing time and labor. Easily installed on old or new machines. Sizes fractional to 8 H.P. Ratios to 3:1 infinitely variable. Also investigate the new Lovejoy Tilting Motor Base. Adjustable width and length to accommodate all fractional motors up to ¾ H.P. Low price.

Send for catalog and complete data.

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. Lake Street Chicago 44, Illinois
Also Mfrs. Lovejoy Universal Joints and Lovejoy Flexible Couplings

For more details circle NED-4382 on enclosed inquiry slip

ATKOMATIC *Solenoid* Valves



FOR AUTOMATIC OR REMOTE CONTROL

1. DAMAGING WATER HAMMER ELIMINATED.
2. ALL INTERNAL PARTS ACCESSIBLE without removing valve from line or breaking electrical connection.
3. PACKLESS—sealed operating chamber. No outside moving parts.
4. ONLY 3 MOVING PARTS, and no linkage of parts.
5. LINE PRESSURE IS MAIN ACTUATING FORCE—operates with slight pressure drop across seat.
6. OPERATING PRESSURES TO 3000 PSI.

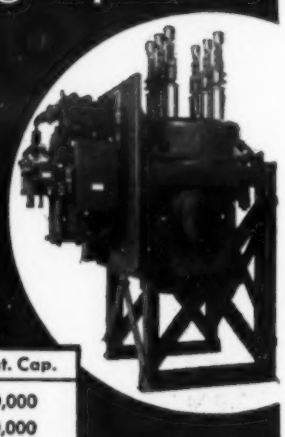
ALL SIZES ¼" to 3"

WRITE FOR LITERATURE

Atkomatic Valve Co.
545 WEST ABBOTT ST.
INDIANAPOLIS 25, INDIANA

For more details circle NED-4383 on enclosed inquiry slip

For Interrupting Capacities 100,000 to 500,000 Kva



ALLIS-CHALMERS TYPE DZ INDOOR OIL CIRCUIT BREAKERS

Rated Kv	Rated Amperes	Kva Int. Cap.
7.2	600, 1200, 2000	100,000
13.8	600, 1200	150,000
13.8	1200	250,000
13.8	1200, 2000	500,000

A-3687

THESE INDOOR BREAKERS are widely used for station and industrial service. *Ruptor* arc interrupting devices minimize contact burning and oil deterioration. Silver-plated main current carrying contacts and special alloy arcing contacts provide long life. Mechanically trip-free operator provides instant breaker operation under all fault conditions.

For complete information on these circuit breakers call your nearest A-C sales office, or write to Allis-Chalmers, Milwaukee 1, Wisconsin. Ask for Bulletins 71B6179 and 71B6129.

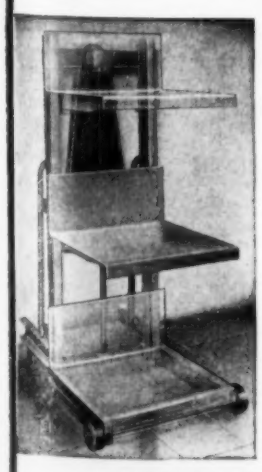
Ruptor is an Allis-Chalmers trademark.

ALLIS-CHALMERS

For more details circle NED-4384 on enclosed inquiry slip

PORTELVATOR® "S"

for extra low pick-ups and extra high lifts.



Safety of Operation

is inherent in the mechanical lift principle of this brawny tool, which transmits power through worm, worm gear, and screw.

Eliminates "ganging-up" on heavy lifts. Reduces occurrence of industrial accidents. Saves valuable production time.

Get complete information now and be ready for the challenge ahead. Write for Bulletin P-506-S.

CAPACITY . . . . . 1000 POUNDS
MAXIMUM PLATFORM HEIGHT . . 58"
MINIMUM PLATFORM HEIGHT . . 6"

THE *Hamilton* TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

For more details circle NED-4385 on enclosed inquiry slip

RUBBER-LINED DRUMS made in 30 and 50-gallon sizes

Five separate plies comprise the lining of 30 and 50-gallon rubber-lined drums. They are lined with ⅛ or 3/16-in., five-ply, 70 shore (semi-hard), smooth, non-porous, uncured natural rubber which is both abrasion and chemical resistant. Plies are fused together in the curing process to insure complete coverage of the metal and to minimize chance of air pockets developing. Drums are available with inside lining only or with both inside and outside lining. Made by **Latex Dipped Products Co.**, Dept. B, 4520 E. Washington Blvd., Los Angeles 22, Calif.

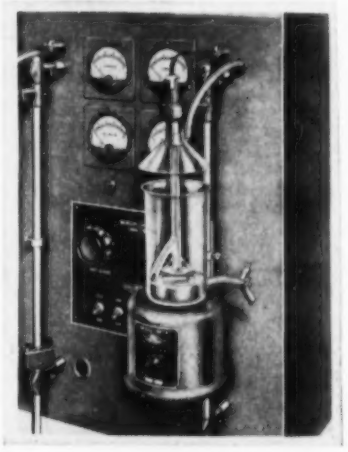
For more details circle NED-4386 on enclosed inquiry slip

DRILL STOP controls drilling or reaming depth

Close control of depth in drilling, center drilling and remaining operations is afforded by drill stop which can be used on turret lathes, drill presses and radial drills. Where quick change arrangement is used in one station for sequence operations, uniform hole depth can be held with this stop. Device stops on fixture bushing or work. Threaded lock bushing provides quick adjustment of stop collar. Small body diameter allows operation of stop on close centers or near shoulders. This alloy steel drill stop with hardened wear points is made in eight sizes having Morse taper shanks and holes. Four chip grooves remove chips from surface on which it stops. Made by **Scully-Jones & Co.**, 1952 S. Rockwell St., Chicago 8, Ill.

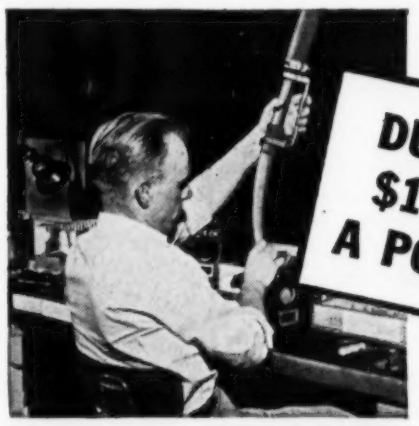
For more details circle NED-4387 on enclosed inquiry slip

DUAL MERCALYZER removes heavy metals from solution



Dual mercalyzer makes use of mercury cathode method for rapid removal of heavy metal from solution. Apparatus can be used for determination, separation or removal of metals, and quantitative analysis by electrodeposition. It removes up to 5 grams of metal rapidly because of its wide range (from 0 to 10 v or amp per station) and its renewable surface mercury cathode. Dual controls permit two determinations to be run simultaneously and independently. Operation is on 115 or 230 v ac. Instrument has vacuum connection for glass hoods to permit removal of acid fumes. Mag-Mix stirrers supply agitation at each position. Made by **Precision Scientific Co.**, 3735 W. Cortland St., Chicago 47, Ill.

For more details circle NED-4388 on enclosed inquiry slip



DUST AT $10,000 A POUND?

One ounce of dust distributed over an assembly or inspection bench, or in the wrong place in a ceramic or finishing plant can cost thousands of dollars in rejects or service complaints in the field.

And how little it would cost to provide every assembly and inspection bench with vacuum tools and put automatic dust removing devices on all moving production lines.

You pipe compressed air all over the plant, just like water, gas, electricity. Consider Spencer Vacuum the same way—it's the new tool of industry. You won't be the first to try it in your industry. Bulletin No. 144 shows 132 ways it is cutting costs—improving sanitation. Ask for it.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD

439-Q

For more details circle NED-4389 on enclosed inquiry slip

5 FIRMS ALONE PURCHASED. . .

2,165,458 LBS. SPEED PATCH

WORLD'S FINEST, FASTEST, FLOOR FIXER!

REPEAT ORDERS ARE PROOF OF A PRODUCTS MERIT

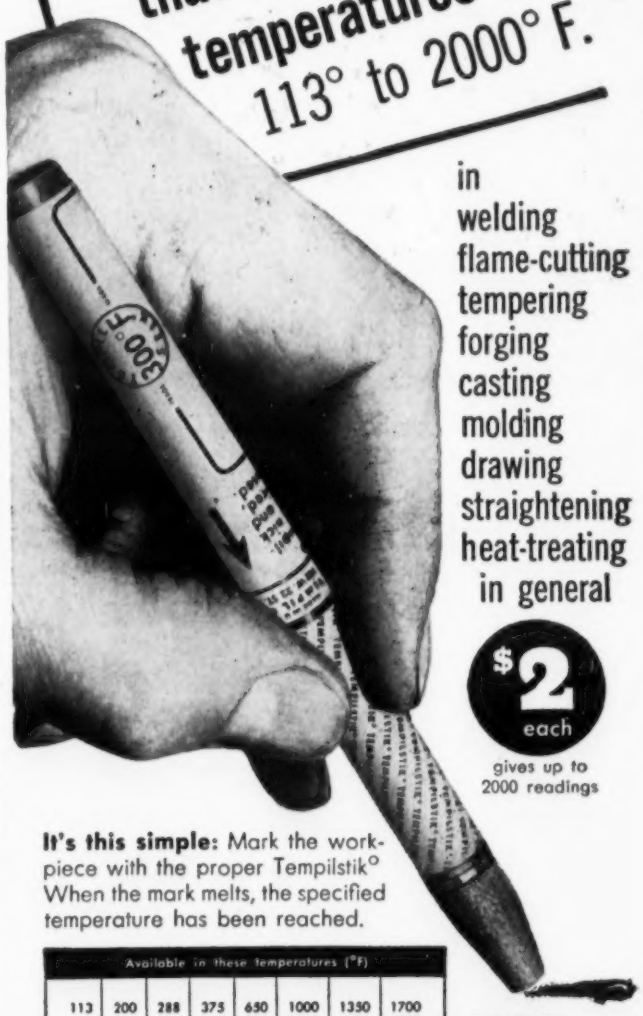
Many millions of pounds of Speed-Patch are in use. Five firms alone, purchased 2,165,458 lbs. The reason is simple. Speed-Patch is unequalled for patching worn, cracked, cratered floors. Easy to apply. Takes only one minute per square foot. No waiting to set or dry . . . truck over it immediately. It's tough, long-lasting, economical, ready-mixed. Write for details NOW!

ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois
In Canada: Rock-Tred Corporation (Canada) Limited, Toronto 5

For more details circle NED-4390 on enclosed inquiry slip

Tempilstiks°

the amazing crayons that tell working temperatures from 113° to 2000° F.



in welding
flame-cutting
tempering
forging
casting
molding
drawing
straightening
heat-treating
in general

$2 each

gives up to 2000 readings

It's this simple: Mark the workpiece with the proper Tempilstik° When the mark melts, the specified temperature has been reached.

Available in these temperatures (°F)

113	200	288	375	650	1000	1350	1700
125	213	300	388	700	1050	1400	1750
138	225	313	400	750	1100	1450	1800
150	238	325	450	800	1150	1500	1850
163	250	338	500	850	1200	1550	1900
175	263	350	550	900	1250	1600	1950
188	275	363	600	950	1300	1650	2000

Also available in pellet and liquid form.

FREE SAMPLE PELLETS

Use this coupon. Specify temperatures of interest to you.

TEMPIL° CORP., 132 West 22nd St., N. Y. 11, N. Y.

Please send free sample pellets in the following rating_____

Name_____

Company_____

Address_____

For more details circle NED-4391 on enclosed inquiry slip

MERRILL MATERIALS HANDLING DEVICES

3M-2

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

For more details circle NED-4392 on enclosed inquiry slip

★ POWER RELAYS
★ SMALL RELAYS
★ SENSITIVE RELAYS
★ LATCH RELAYS
★ INSTRUMENT-CONTROLLED RELAYS and SETS
★ SEQUENCE RELAYS
★ TIMING UNITS
★ SPECIAL-PURPOSE RELAYS

5,348
RELAY TYPES

...mean that you get exactly the right relay for the job!

STRUTHERS-DUNN

Struthers-Dunn, Inc., 150 N. 13th St., Phila. 7, Pa.

BALTIMORE • BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI
CLEVELAND • DALLAS • DETROIT • KANSAS CITY • LOS ANGELES
MINNEAPOLIS • MONTREAL • NEW ORLEANS • NEW YORK • PITTSBURGH
ST. LOUIS • SAN FRANCISCO • SEATTLE • SYRACUSE • TORONTO

For more details circle NED-4393 on enclosed inquiry slip

WHY "sweat it out?"

WHEN Conveyors will move it faster...cheaper

How many material handling jobs are you still doing the hard way? How many precious man hours, dollars and minutes are you spending to move materials from here to there?

Whether it's bags, boxes, barrels, bales or bulk . . . whether it's unloading, loading, transporting, lifting or lowering, chances are that a Lippmann Conveyor or combination of them will show substantial savings in time, men and money.

Lippmann is headquarters for all kinds of conveyors, and 28 years of manufacturing and application experience. Lippmann engineers are ready and eager to help you solve your material handling problems. A card or letter will bring prompt and sincere attention to your regular or special requirements.

LEW LIPPMANN ENGINEERING WORKS
4631 W. Mitchell St., Milwaukee 14, Wisconsin

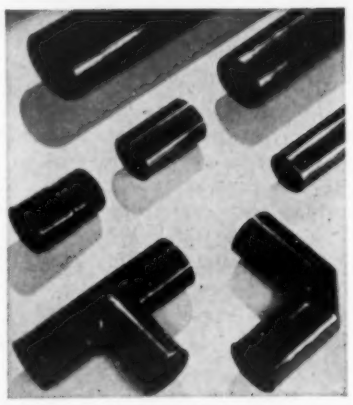
For more details circle NED-4394 on enclosed inquiry slip

CARBIDE TIPPED DRILL BIT quickly cuts large holes in masonry

Holes from ¾ to 5 in. can be drilled in such materials as concrete with bluestone or granite aggregate or solid granite with Thunder-Core carbide tipped drill bits. One man can drill the holes in hard masonry quickly and easily without tool binding, resulting in considerable savings in time and labor. Made by **New England Carbide Tool Co.**, 54 Brookline St., Cambridge 39, Mass.

For more details circle NED-4395 on enclosed inquiry slip

PLASTIC PIPE FITTINGS threaded or slip-sleeve types made



Light in weight, these Tenite plastic fittings are produced in variety of sizes and shapes, threaded or slip-sleeve, for joining Tenite plastic pipe of type used in oil fields. Fittings have high impact and corrosion resistance and are unaffected by wide range of weather and soil conditions. Couplings can be quickly and permanently bonded in Tenite lines by means of cement and thinner which have an affinity for the plastic. Distributed by **Perrault Brothers, Inc.**, P. O. Box 310, Tulsa, Okla.

For more details circle NED-4396 on enclosed inquiry slip

VISE & POSITIONER COMBINATION holds and positions work rapidly

Operator can hold light work and position it rapidly with cam acting vise mounted in Junior Powrarm, a tool which allows positioning of work for any operation. Work weighing up to 24 lb is held by this tool combination which has pressure pad under the swivel ball controlled by convenient knob. Motion in a 360-degree horizontal, 180-degree vertical and 360-degree axial planes is possible. Vise has maximum adjustable jaw opening of ⅜-in., and cam travel of 3/16-in. Reinforced fiber jaws are 2 in. wide. Made by **Wilton Tool Mfg. Co.**, Dept. NED, 925 Wrightwood Ave., Chicago 14, Ill.

For more details circle NED-4397 on enclosed inquiry slip

PAINT OVER RUST WITH TYGORUST!

"the 'no-prep' vinyl primer"

- minimizes surface preparation
- dries hard in minutes
- goes under any type finish
- provides excellent adhesion
- inhibits rust formation

TYGORUST is a new and unique primer specifically developed to permit the use of TYGON and other vinyl based coatings on rusted ferrous metals. Its outstanding features include easy application — fast drying — high coverage — excellent adhesion to wet or dry rusted steel, wood, concrete, or previously painted surfaces — excellent adhesion for vinyl, nitrocellulose, alkyd, oleoresinous, or bituminous finishes—and, real resistance to rust formation.

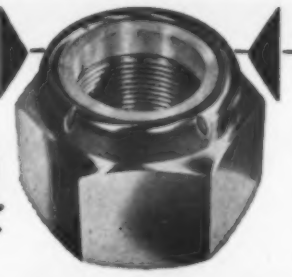
359C

Write for details today — try TYGORUST tomorrow!

U. S. STONEWARE CO.
Akron 9, Ohio

For more details circle NED-4398 on enclosed inquiry slip

Up-to-date



FASTENING INFORMATION

Have the answers at your fingertips before fastener problems arise. Write ESNA for the latest bulletin on self-locking Elastic Stop Nuts. We'll include the AN-ESNA conversion chart.

You'll find Elastic Stop Nuts' positive, vibration-proof protection can cut maintenance costs . . . insure that precise adjustments will hold true. The famous Red Elastic Collar prevents loosening due to vibration, keeps locking threads corrosion-free, provides for accurate bolt loading and seals against liquid seepage along the bolt threads. Elastic Stop Nuts are available in more than 3000 different types and sizes—all self-locking, vibration-proof and reusable.

WRITE now for ESNA's help with your present or future fastener problems. Address Dept. N15-537.

ESNA
Elastic Stop Nut Corporation of America
2330 Vauxhall Road, Union, N. J.

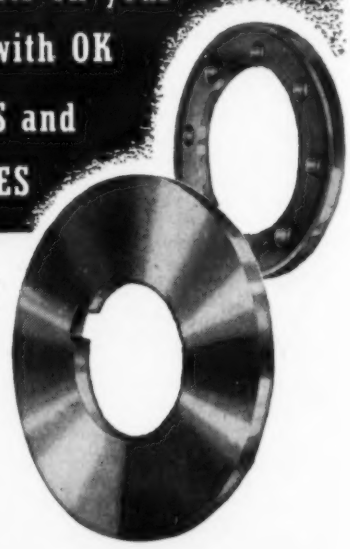
DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

For more details circle NED-4399 on enclosed inquiry slip

it's OK

...let'er go!

cut costs on your toughest jobs with OK SHEAR BLADES and SLITTER KNIVES



Heat Treating does it. Gives them maximum toughness and keen edge holding qualities. You get longer runs between re-grindings.

OK Battle Axe Shear Blades for shearing up to and including ¼" mild steel or equivalent.

OK Dura-Chrome Shear Blades for shearing hot or cold plate steel up to 1¼" or equivalent.

OK Standard Shear Blades for any type shearing when only short runs or little shearing is done; also for heavy plate shearing.

OK Gang Slitters for slitting steel, precision ground to ± .0002 tolerances.

OK Rotary Shears and Cutters for trimming sheet steel and light plates.

Write today giving quantity and sizes.

GO WITH OHIO GREEN

THE OHIO KNIFE CO.
CINCINNATI 23, OHIO

For more details circle NED-4400 on enclosed inquiry slip

INDUSTRIAL DOORS "PACKAGED" — *Ready to Install*

A 3 hour job for any maintenance crew.

Only the Prest-O-Matic comes to you with door and jambs, and all hardware including motor operator, completely assembled. This is your guarantee of perfect performance.

★ OPEN OR CLOSE IN 3½ SECONDS
★ PERMITS FULL USE OF DOORWAY WIDTH
★ NO ALTERATIONS OR FITTING NEEDED
★ SEALED AGAINST WEATHER OR WIND

PREST-O-MATIC

Industrial Doors function faultlessly because they are designed "in balance", utilize thrust and roller bearings and operating mechanism adequate to heaviest usage. Pneumatic, Pull-cord, Floor Plate or Electric Eye optional.

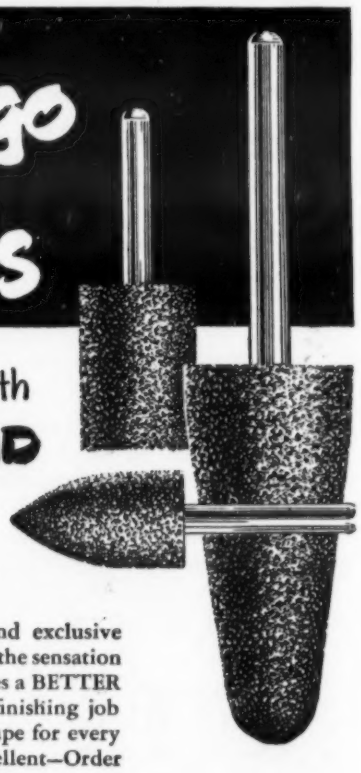
Write for Catalog!

CLARK DOOR COMPANY
511 Hunterdon Avenue, Newark 8, N. J.

For more details circle NED-4401 on enclosed inquiry slip

Chicago MOUNTED Wheels

...now even better with **79E BOND**



Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & Mfg. Co.
Dept. NED • 1101 West Monroe Street, Chicago 7

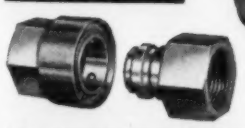
For more details circle NED-4402 on enclosed inquiry slip

Roylyn COUPLINGS*

*FOR MANY VARIED INDUSTRIAL USES

☆ RAILROAD DIESEL FUEL LINES
☆ MARINE FUEL LOADING LINES
☆ TANK & LINE PRESSURE TIGHT CAPS
☆ PROCESSING & CHEMICAL INDUSTRIES
☆ LIQUID & AIR TRANSFER LINES
☆ LOADING VALVES & CONNECTIONS
☆ CLOSED HYDRAULIC SYSTEMS

OPEN COUPLINGS



SELF-SEALING COUPLINGS

CAPS & PLUGS

HOSE ASSEMBLIES

Features like these mean CONNECT WITH ROYLYN!

★ SIZE RANGE . . . ⅛ inch to 2½ inches. Up to 6 inches in some styles.
★ PRESSURE RANGE . . . 650 to 6600 P.S.I.
★ MATERIALS . . . Aluminum alloy, brass, carbon steel, alloy steel and stainless steel.
★ OPERATION . . . A simple "twist of the wrist"—NO TOOLS REQUIRED!
★ POSITIVE LOCK . . . Locks with a "snap" and positively will not uncouple with vibration, pressure or rotation of the connected hose.
★ SAFETY . . . Laboratory tests for extremes of heat, cold, vibration and years of hard service have proven its rugged reliability.
★ VERSATILITY . . . Open nipple can be used with self-sealing coupling to provide shut-off on one side only. Also open coupling can be used with self-sealing nipple to provide check valve action.

There is a Roylyn Coupling available for practically any type of flexible connection for air, water, hydraulic and chemical applications. Write today for free illustrated catalog and nearest dealer. Inquiries regarding available dealerships are invited.

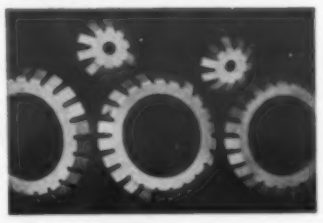
ROYLYN, Incorporated
1712 STANDARD AVE., GLENDALE 1, CALIF.
WUX, TWX GLENDALE, CALIF. 7158

Roylyn INCORPORATED

Roylyn makes Good Connections for You!

For more details circle NED-4403 on enclosed inquiry slip

PACKING CUP EXPANDER insures positive sealing action

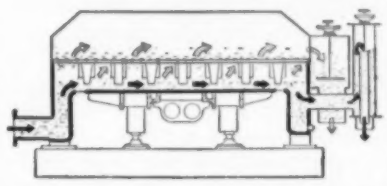


Designed to eliminate leakage in hydraulic and pneumatic cylinders, ES-11 line of cup expanders insures positive sealing action of cup packings by exerting controlled pressure on packing lip. Expanders can be used on pumps, hydraulic presses, jacks and similar mechanisms that use cup packings. They are available for packing diameters from 1¼ to 2⅛ in., and are fabricated from strip brass that is resistant to action of brine, alcohol and gasoline. Made by **HPL Mfg. Co.**, 15211 Miles Ave., Cleveland 28, O.

For more details circle NED-4404 on enclosed inquiry slip

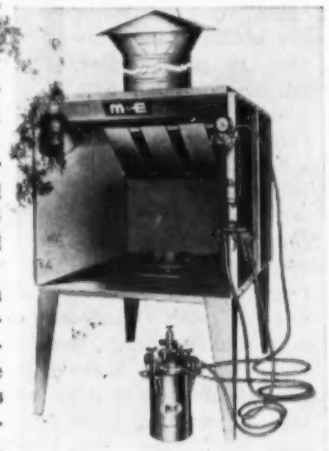
VIBRATING PULP SCREEN features high screening capacity

Recently acquired from Europe and further developed for use in this country, this Oliver-Ahlfors Upflow vibrating pulp screen is adaptable for primary and secondary screening of all types of bleached and unbleached pulps. Advantages reported for upward flow are high screening capacities because slotted plate screen does not clog; knots, dirt and other rejects drop down and away from screening surfaces; fast, gentle and easily adjusted vibrations; discharge of rejects constantly at a controllable rate; and ability to handle high pulp consistencies with minimum of power. Made by **Oliver United Filters Inc.**, 31 W. 42nd St., New York 18, N. Y.



For more details circle NED-4405 on enclosed inquiry slip

SPRAY BOOTH for spray finishing of small parts



Efficient spray finishing of small pieces is facilitated by DB-30 model spray booth designed for maintenance shops and small lot spraying. Unit is furnished with 10-in. diameter turntable, 16-cfm oil and water extractor, 251-RIG 2-gal ASME approved pressure tank, No. 17 production spray gun with sufficient hose and connections and a VL-150-w vaporproof light. Heavy gage sheet metal booth includes fire deflector curtain, engineered distributor plates, and is furnished with Underwriters' Laboratories approved exhaust unit. An all-purpose heavy gage galvanized weather canopy, damper, 30-in. section or clean-out door and piping complete the system. Made by **M & E Mfg. Co.**, 2577 Winthrop Ave., Indianapolis 5, Ind.

For more details circle NED-4406 on enclosed inquiry slip

SAVES TIME EFFORT ERRORS

LABELON PLASTIC TAPE

Write on it

WON'T SMUDGE
★
STAYS CLEAN FOREVER
★
RESISTS: DIRT · OIL WATER · ACIDS

STICKS WITHOUT MOISTENING

PERFECT FOR FACTORY, LABORATORY, OFFICE

Nothing else like LABELON—the amazing "Write on it" plastic tape! Use it to label stockroom shelves, bins, tools, hard-to-mark parts; for indicating rejects and service department repairs; for marking laboratory equipment, supplies, experiments; for panelboards or wiring; for office files, folders, etc.

LABELON TAPE sticks without moistening to any smooth, clean surface—yet can be quickly removed. Resists heat up to 150°. Just write on it with pencil or stylus—message won't smudge. Choice of widths and colors. Handy dispenser with cutter bar.

See your nearest dealer, or write for sample and prices.

Write to Dept. NED

LABELON TAPE CO., Inc.
450 Atlantic Ave., Rochester 9, N.Y.

For more details circle NED-4407 on enclosed inquiry slip

BRAKE DIES

- UP TO 14 FEET LONG
- MADE FROM CHISEL STEEL BILLETS—FORGED TO SIZE AND THEN MACHINED.
- EVERY SET OF BRAKE DIES IS DEVELOPED FROM A PRELIMINARY SMALL "TRY-OUT" SECTION—TO GET THE RIGHT SHAPE ON YOUR MATERIAL, THEN

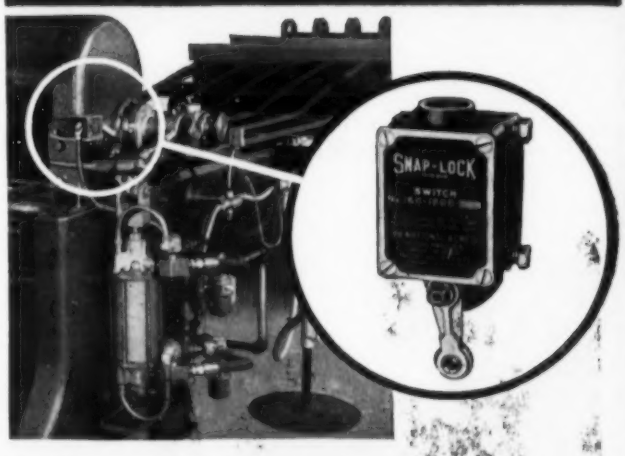
- WE MAKE YOUR SET OF PERFECT BENDING DIES
- BY THE MAKERS OF THE FAMOUS SEMCO NIBBLER PRESS.

WRITE FOR LATEST LITERATURE
ASK FOR ESTIMATES

SEMCO
SERVICE MACHINE COMPANY
INCORPORATED
202 MILLER STREET, ELIZABETH, N. J.

For more details circle NED-4408 on enclosed inquiry slip

SNAP-LOCK TRADE MARK **—For Split-Second Precision**



*400 OPERATIONS PER MINUTE ON THIS COE VENEER CLIPPER

The Coe Manufacturing Company, "world's largest makers of veneer machinery," have devised their own special type of torture test for limit switches in their new air-operated veneer clipping machine. No ordinary switch could survive the ordeal of operating 400 times a minutes under such heavy duty service.

Snap-Lock passed the test with flying colors! Its record of dependability is renowned; over 80% of the nation's machine tool builders have standardized on Snap-Lock for dependable service.

Here are the exclusive design and construction features that have contributed to this outstanding acceptance record:

1. Separate sealed electrical and mechanical sides (for added safety)
2. Hardened steel moving parts (for greater strength, longer life)
3. Positive on or off locking (can't stop on dead center)
4. SNAP make and break (fast acting — accurate)
5. Coin silver self-wiping contacts (no arcing)

Snap-Lock Limit Switches are built in a variety of types and sizes, to suit every industrial application; special mountings are available. May we show you how they can be designed into your product?

The complete range of Namco standard Snap-Lock Limit Switches is illustrated and tabulated in our new engineering bulletin EM-51. Be sure to get your copy.

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182 East 131st Street • Cleveland 8, Ohio

THE NATIONAL ACME
CLEVELAND, OHIO

For more details circle NED-4409 on enclosed inquiry slip

THIS Hopper Assures Dependable Material Flow because...

Model V-60 Semi-Noiseless Vibrator eliminates material arching and plugging in hopper... saves time and equipment.

... its equipped with a

SYNTRON

ELECTRIC VIBRATOR

With Variable Control of Power

3600 controllable vibrations per minute keep even the most stubborn materials flowing freely thru bins, hoppers, chutes and screens ... of any size ... WITHOUT THE HAMMERING AND RODDING AND POKING THAT WASTES MANPOWER AND DAMAGES EQUIPMENT.

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SYNTRON CO.

For more details circle NED-4410 on enclosed inquiry slip

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*Tolerances for flushness and fit controlled through Camcar Special Tooling Methods

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Continuous Inventory of A.N. Fasteners on hand to service all A.N. Contractors' Requirements promptly.

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601 EIGHTEENTH AVENUE • ROCKFORD, ILLINOIS

"PRODUCTION-DESIGNED for your Assembly Line"

For more details circle NED-4411 on enclosed inquiry slip

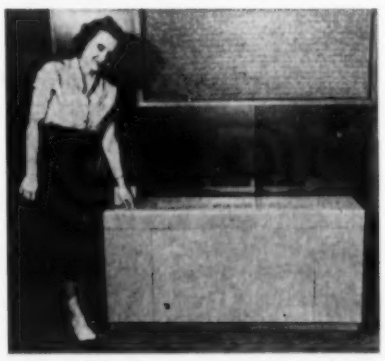
pH METER
features compactness, portability and built-in battery power supply

Light in weight and compact, model N pH meter can be used anywhere, as it does not depend upon outside power circuits for operation. Instrument measures 4 x 6 x 9½ in., including built-in power supply, and weighs less than 8 lb. Electrode support is mounted on the side of the case and can be rotated to permit instrument to be used in either horizontal or vertical position. The practically unbreakable interchangeable electrodes cover the pH range from 0 to 14 and can be safely used at temperatures from freezing to boiling. Meter is accurate to closer than 0.05-pH.

Condition of the batteries can be checked without opening the case or disturbing connections. Less than 10 seconds are required for instrument to warm up. Each tube is shock-mounted and the instrument is splashproof. Two versions of model N are offered. N-1 is basic instrument with electrodes, buffer KC solution and beaker, and N-2 includes auxiliary carrying case which contains electrodes, buffer, beaker, thermometer and other necessary accessories. Made by **Beckman Instruments, Inc.,** Dept. 56, 800 Mission St., South Pasadena 5, Calif.

For more details circle NED-4412 on enclosed inquiry slip

ROOM AIR CONDITIONER
for remote multiple installation



Both summer cooling and winter heating is provided by Remotaire remote type room air conditioner for multiple installation in plant office buildings, apartment houses, hotels, hospitals and residences. Connected to centrally located water heating and cooling plants, unit offers individual room temperature control. It is made in large twin-fan model for delivering 400 cu ft of conditioned air per minute, and in single fan model which delivers half that volume. Heating and cooling coils, fan unit and valves are housed in reinforced, bonderized steel cabinet finished in gray baked-on enamel. Both ventilation air, coming from outside through wall aperture behind conditioner, and recirculated air are filtered separately before blending with fan unit. Quiet, low speed motor drives fans. Made by **American Radiator & Standard Sanitary Corp.,** Dept. NED-42, P. O. Box 1226, Pittsburgh 30, Pa.

For more details circle NED-4413 on enclosed inquiry slip

10A1019 10A1033 10A1038 10A1026

recorders

RECORD TIME • COUNT QUANTITY AND WEIGHT

Actuated by an electrical impulse . . . operates on the output of a scaler, photo tube, limit switch or any similar device. Records counts with relation to time and quantity on a roll of tape . . . automatically resets to zero.

In Radioactive Research, it saves precious man hours and results in greater economy and efficiency.

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Whatever your counting problems, our Engineering Department can adapt these Recorders to meet your particular need.

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AUTOMATIC WEIGHT RECORDERS SINCE 1888

STREETER-AMET COMPANY

4101 N. RAVENSWOOD AVENUE • CHICAGO 13, ILLINOIS

SCALES • WEIGHT RECORDERS • HI-SPEED COUNTERS

For more details circle NED-4414 on enclosed inquiry slip

Continental

PACKAGED AUTOMATIC BOILERS

The Continental Automatic Boiler is easily installed at low cost. With a guaranteed high operating efficiency, it assures you continuing savings year after year. Steam moisture content at less than 1% is proven by independent laboratory tests. Fully automatic, the Continental assures a high heat transfer with resultant low gas temperature at the stack. No furnace refractory makes possible easy access to front and rear of boiler through hinged doors. Economically burns oil, gas or combination. Some sizes carried in stock. Details and specifications gladly sent on request. Write today!

Contact your local supplier today, or write

BOILER ENGINEERING AND SUPPLY COMPANY, INC.

Manavon Street • Phoenixville, Pa.

40 Years of Boiler Experience

For more details circle NED-4415 on enclosed inquiry slip

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RINGS & BANDS From ⅜" I.D. on up COPPER ALLOYS STEEL-ALUMINUM

For: Supporting, Retaining, Fastening

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OVER 48 YEARS OF PRECISION METAL FABRICATION

For more details circle NED-4416 on enclosed inquiry slip

ACCURATE...

to ± 1.5 pts. ROCKWELL!

to ± 5 pts. BRINELL!

NOW! *At-the-job, direct readings* of all metal types, sizes and shapes. Quick and simple . . . just press handgrips, read dial. Unskilled labor can test assembly line work. No conversion scales, no calculations! Ideal for parts, finished products no matter how large or small. Rockwell "A", "B", "C" scales. Low and medium Brinell scales. Both standard and superficial readings in one instrument!

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NEWAGE INTERNATIONAL, INC.

235 EAST 42nd STREET, NEW YORK 17, N. Y.

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JELLIFF RESISTANCE WIRES

ARE VERY MUCH AT HOME IN A **HOT • SPOT**

ALLOY	OHMS PER CMF	MAX. OPER. TEMP.	WIRE DIA. RANGE	FORMS†	USES
1000	1000	500° F	0.0010 0.0009	W-R	Compact, stable precision Resistors
ALLOY C	675	1700° F	0.2890 0.0008	W-R	Appliances and Resistors
ALLOY A	650	2100° F	0.0410 0.0010	W-R	High-Temp. Furnaces and Resistors
ALLOY 45	294	930° F	0.2890 0.0010	W-R	Precision Applications

†W—wire R—ribbon

★

Whether the heat is literal (up to 2100F), or figurative in the sense that performance under difficult conditions is a *must*, we have an alloy for almost any conceivable requirement. The above Table may suggest possible applications to your products.

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Complete Technical Data are available from Department 11.

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS
LEKTROMESH
RESISTANCE WIRE
WIRE MESH PARTS
WIRE CLOTH
STRAINERS • FILTERS
SOUTHPORT CONNECTICUT

▲ For more details circle NED-4418 on enclosed inquiry slip ▲

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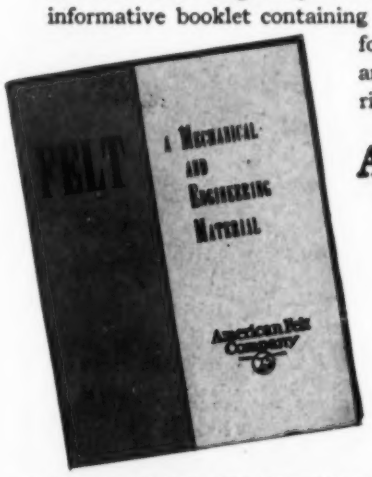
Felt is an engineering and engineered material, which can be specified, purchased and applied as accurately as any other. There are 16 chief mechanical functions that felt can perform, and many others of less importance. Indeed, for nearly every process or product felt can serve advantageously. Send for this valuable and informative booklet containing 54 pages of data. Ask for "Felt—a Mechanical and Engineering Material." Sent free.

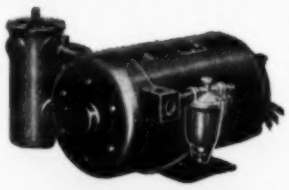


American Felt Company
TRADE MARK
62 GLENVILLE ROAD
GLENVILLE, CONN.

▲ For more details circle NED-4419 on enclosed inquiry slip ▲

need **VACUUM** or AIR PRESSURE?

Look over the MOTOAIR, before you buy! Here is a Pump, built *integrally* with its motor for compact economy of space, weight and parts. The lubrication is automatic and visible!



No valves to turn on or off. Rotor blades compensate for their wear. No discharge oil. Available for normal, wall or ceiling mounting. Built-in exhaust air filter.

MOTOAIR® PUMP

NO BELTS; NO GEARS; NO EXTENDED DRIVES!
That means less parts to wear; lower maintenence!

818 *Ask for Catalog!*

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

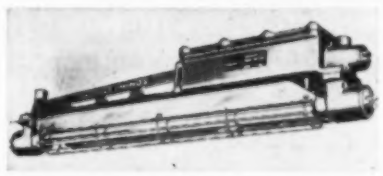
▲ For more details circle NED-4420 on enclosed inquiry slip ▲

ALUMINUM DESICCATOR
undamaged by bumping or dropping

This lightweight Alumaloy cast aluminum desiccator is designed as a lifetime model and cannot be damaged by bumping or dropping. It is 4½ in. square and has cover also of cast aluminum alloy. Ground joint seal assures air tight closure, and aluminum body dissipates heat quickly. Finish is baked grey metallized Hammerloid. Made by **Laboratory Industries, Inc.**, 4708 W. North Ave., Chicago 39, Ill.

▲ For more details circle NED-4421 on enclosed inquiry slip ▲

GERMICIDAL LAMP FIXTURE
is of explosionproof design



Designed to accommodate G-E or Westinghouse single-pin G36T6 Slimline germicidal lamps, type EVF germicidal lamp fixture has tube of explosion-resisting Vycor glass to house lamp. Tube is sealed at each end into aluminum end-castings with threaded covers for access and relamping. Vycor glass was selected for its high ultra-violet transmission. Rigid structure consisting of aluminum ballast housing and extension piece support tube end-castings. Each end of fixture has ½-in. conduit hub for mounting. Underwriters' Laboratories approved for classes I and II hazardous locations, fixture can be supplied with a reflector to protect personnel from direct radiation. Made by **Crouse-Hinds Co.**, 1347 Wolf St., Syracuse 1, N. Y.

▲ For more details circle NED-4422 on enclosed inquiry slip ▲

SPEED REDUCER-MOTOR
offered in ratings of 20 and 25 hp

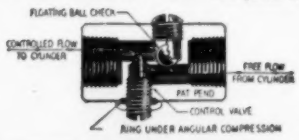
Type KFEA variable speed units with single reduction gears are being made in ratings of 20 and 25 hp. Units are made with speeds of 728 rpm and lower with infinite speed adjustment within ranges of 2:1, 3:1 or 4:1. Illustrated 25-hp model has speed variation of 4:1 and output speeds of 81 to 324 rpm. Features include positive pulley adjustment, accurate maintenance of speeds under varying loads, belt tension in proportion to load and direct-through ventilation. All ratings are available with dripproof or splashproof construction. Made by **Sterling Electric Motors, Inc.**, Dept. NED, 5401 Anaheim-Telegraph Rd., Los Angeles 22, Calif.

▲ For more details circle NED-4423 on enclosed inquiry slip ▲

FLOW CONTROL VALVE
for Cylinder Speed Adjustments over a WIDE RANGE IN AIR OR HYDRAULIC USE

The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, Check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or steel (5000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 5 sizes—⅛", ¼", ⅜", ½", and ¾".

Attractive prices — immediate delivery. Write for illustrated circular and price list.



WRITE

Pneu-Trol Devices, Inc.
1432 N. Keating Ave., Chicago, Ill.

▲ For more details circle NED-4424 on enclosed inquiry slip ▲

General BOX COMPANY

GENERAL OFFICES:
1859 MINER STREET, DES PLAINES, ILL.

DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N. J., Detroit, East St. Louis, Kansas City, Louisville, General Box Company of Mississippi, Meridian Miss., Milwaukee, Sheboygan, Winchendon. Continental Box Company, Inc.: Houston, Dallas.

▲ For more details circle NED-4425 on enclosed inquiry slip ▲

For Lubricating Devices Call On **GITS** First!

GITS Bros. covers the *entire range* of lubricating devices: Oil Hole Covers, Oil Cups, Grease Cups, Bottle Oilers, Gauges. Gravity-Feed, Wick-Feed, Constant Level, Vibrating Rod styles. Threaded or Drive-type. Elbow or Straight.

GITS Bros. offers the most complete selection of standard styles.

GITS consistent quality in design, materials and machining has made Gits Lubricating Devices the standard for industry for more than 40 years.

GITS Lubricating Devices are far-famed for solving tough oiling problems at low cost.

GITS Bros. Engineering Staff—true specialists in lubrication engineering—is at your disposal.

Write today for free illustrated Price Guide Catalog. Use it as your handy reference for lubricating devices.

GITS BROS. MFG. CO.
1833 S. Kilbourn Ave. • Chicago 23, Ill.

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Engineers Like GORTON
Tracer-Control Versatility

WORK SIZE: Tiny parts up to areas 10 by 20 feet . . . from dental instruments to ship building.

WORK RANGE: Profiling, routing, die sinking, mold cutting, counterboring, chamfering, grooving, graduating, engraving.

WORK SHAPES: Flat, curved, cylindrical, spherical or irregular.

RESULTS: Every piece identical — extremely accurate, with high surface finish.

One of 10 Standard Gorton Tracer-Controlled Pantographs and Duplicators.

Free bulletin, No. 1580, gives complete information. Write for it today.

GEORGE GORTON MACHINE CO.
1905 Racine St., Racine, Wisconsin

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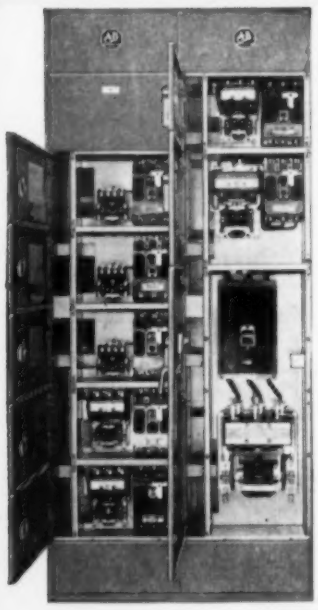

Bulletin 798 Multi-unit Control Centers for Centralized Operations

Bulletin 798 Multi-unit Control Centers can be assembled in one or more vertical sections containing starter panel units with disconnect switch or circuit breaker connected to a common power bus. The result is a completely enclosed, dead front, floor mounted switchboard, ready for connection to your motors in the plant.

Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin

ALLEN-BRADLEY QUALITY MOTOR CONTROL

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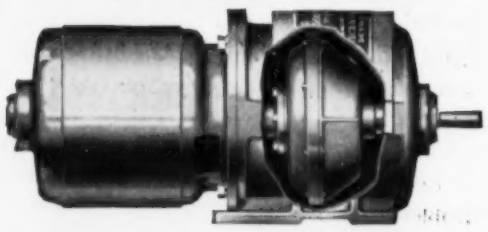
American Blower TM Type GYROL FLUID DRIVES



GYROL FLUID DRIVES OFFER

- Benefits of lowest starting current, smoother acceleration, overload protection and shock absorption.
- Longer wear, better performance and lower maintenance costs for machines and motors.
- In many cases, less expensive control and simplified wiring.
- Complete packaged units, 1 thru 20 H.P., with standard NEMA mounting bolt hole dimensions.

Free trial units are available to original equipment manufacturers.

AMERICAN BLOWER

American Blower Corporation, Detroit 32, Michigan
Division of American Radiator & Standard Sanitary Corporation

Serving home and industry: AMERICAN-STANDARD • AMERICAN BLOWER • ACME CABINETS • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

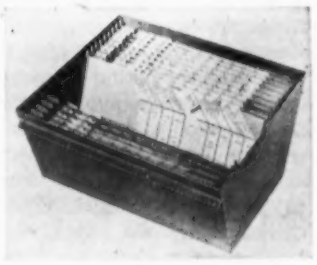
▲ For more details circle NED-4429 on enclosed inquiry slip ▲

CENTRIFUGAL CLUTCH minimizes overload stalls

Self-energizing automatic centrifugal clutch is designed to provide maximum efficiency of any gasoline engine or electric motor wherever load-starting requires low initial torque. Normal speed of motor or engine on which clutch is installed is reached before any load is applied, then load is picked up automatically and smoothly. Stalls or slowdowns below normal operating speeds that occur through overloads are eliminated. Clutch disengages when engine or motor speed is reduced for idling. Chattering is minimized and positive release of clutch is assured through movement of shoe outward and rearward. When motor speed exceeds tension of clutch springs, gentle engagement of drum is made at point to rear of direct central impact point. Various pulleys are available along with four standard clutch models from **Elgin Sweeper Co.**, Clutch Div., 6 Oak St., Elgin, Ill.

▲ For more details circle NED-4430 on enclosed inquiry slip ▲

VISIBLE RECORD FILE available in four sizes



Quick and easy reference to accounts receivable, inventory, personnel, production, sales and other records is afforded by the compact Econofile. It is equipped with a margin control spacer base, transparent plastic panels and is rigidly constructed of crystal gray finished steel. Four sizes, holding from 2000 to 8000 cards, are available. Made by **Vue-Fax Corp.**, 90 Gold St., New York 38, N. Y.

▲ For more details circle NED-4431 on enclosed inquiry slip ▲

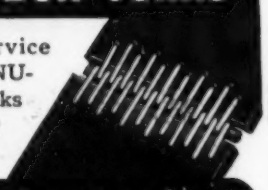
TWO-WHEEL TRAILER SKID five models have 10,000 lb capacity

This two-wheeled Trail-Skid trailer is designed for handling long lengths of materials in confined spaces. Pulled by either fork or platform lift truck, unit is also adaptable for transporting multiple palletized loads. In operation, truck engages coupling mechanism mounted on articulated turntable, lifts skid legs free and moves unit on its rear wheels. Unit is available in five models ranging from 7 to 16 ft long. All have 10,000-lb capacity and feature solid rubber-tired wheels with Timken roller bearings. Load 24 ft long can be turned 90 degrees in intersecting aisles as narrow as 14 ft, 4 in. Made by **Phillips Mine & Mill Supply Co.**, 2303 Jane St., Pittsburgh 3, Pa.

▲ For more details circle NED-4432 on enclosed inquiry slip ▲

for Better Belt Joints

To keep belts in service longer, use only GENUINE Clipper Belt Hooks applied with Clipper Belt Lacers.



use Clipper Belt Hooks

Clipper Hooks are made of the finest quality wire—BETTER than ever before—produced for our exclusive use. Hooks hold with firm, sure grip—give longer satisfactory service.

and Clipper Belt Lacers!

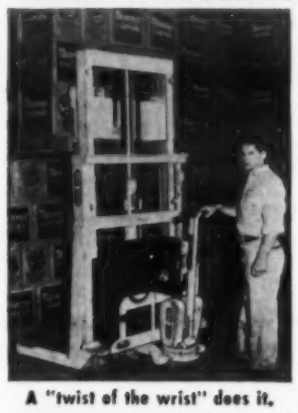
The Clipper No. 9 Portable Lacer laces belts up to 6 inches wide in one quick, easy operation. Under powerful pressure hook legs are embedded flush with the surface of the belt and points clinched, making a perfect joint. Phone your mill supply jobber for a demonstration!

CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN, U.S.A.

Clipper BELT LACING EQUIPMENT

▲ For more details circle NED-4433 on enclosed inquiry slip ▲

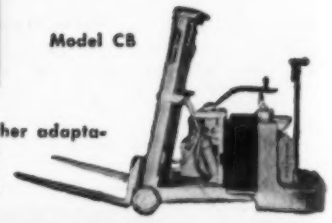
6 basic models MOTO-TRUC'S QUICKLY ADAPTABLE TO ANY PROBLEM IN THE "WALKIE" FIELD



Moto-Truc's Pallets, Platform or Hi-lift, with all controls incorporated in the hand grip, are simple and easy to operate. They are preferred by operators and maintenance men. All welded construction and that extra power saves time, money and man hours. CUT THAT COSTLY "DOWN-TIME."

A "twist of the wrist" does it.

Model CB



MOTO-TRUC MODEL CB is another adaptation for ramps and inclines. 18-volt motor drive handles loads up to 2,500 lbs. Any type mast available.

WRITE FOR BULLETIN NO. 51 TODAY

THE MOTO-TRUC CO.
1953 E. 59th ST., CLEVELAND 3, OHIO
PALLET, PLATFORM AND HI-LIFT TRUCKS

▲ For more details circle NED-4434 on enclosed inquiry slip ▲

NEW!

INDUSTRIAL Rapid-Wheel* GRAVITY CONVEYOR

Moving tote boxes? Heavy cartons? Palletized parts? With Rapistan's new Industrial Rapid-Wheel you now get roller conveyor capacity at wheel conveyor cost. New strategic arrangement of additional steel center bands gives extra-rigid support for every conveyor wheel . . . extra-deep channel frame (3½") raises capacity to 400 lbs. per foot! You get non-skid "wheel action" on turns, smoother flow with less pitch, and longer economical gravity runs.

Rapistan's new Industrial Rapid-Wheel is available in 5' or 10' sections . . . 12" or 18" channel widths. It's a real cost-cutter.

*T.M.

For answers to your conveying problems *send today for prices, specifications, and full information on Rapistan's new low-cost Industrial Rapid-Wheel. To meet special needs, Rapid-Wheel modifications are available at mass-production prices. Write today.*

The RAPIDS-STANDARD CO., Inc.
757 Rapistan Bldg., Grand Rapids, Michigan

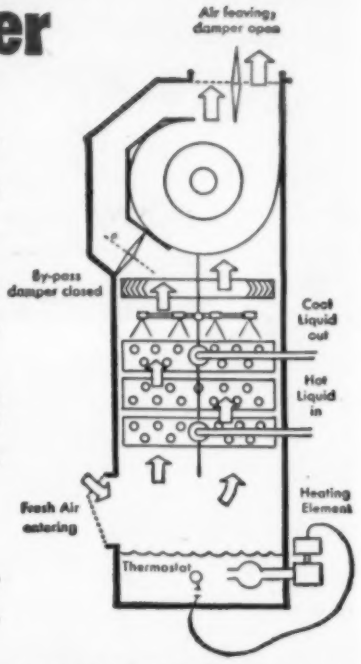
Rapistan®
BETTER CONVEYING EQUIPMENT

Representatives in Principal Cities

CONVEYORS • INDUSTRIAL CASTERS • WHEEL-EZY® TRUCKS

▲ For more details circle NED-4435 on enclosed inquiry slip ▲

NIAGARA Aero Heat Exchanger



1. Extends quenching capacity without extra water or cooling tower.
2. Quickly pulls down heat at initial peak load of Quenching.
3. "Balanced Wet Bulb" Control holds quench bath at proper temperature, heating if needed to start after shut-down, and cools or heats by automatic control.
4. Saves cleaning expense as compared to cooling tower which picks up acids and fumes from air.

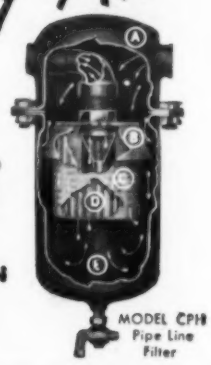
APPLICATIONS
Quench Oils
Cutting Oils
Lubricating Oils
Cooling Water

For help in increasing production, saving of cooling water, write for Bulletin No. 120. Address

NIAGARA BLOWER COMPANY
Over 35 Years of Service in Industrial Air Engineering
Dept. ED, 405 Lexington Ave. New York 17, N. Y.
Experienced District Engineers in all Principal Cities

For more details circle NED-4436 on enclosed inquiry slip

Clean, Dry Air WITH STAYNEW PIPE LINE FILTERS



MODEL CPH Pipe Line Filter

ASSURES CONTINUOUS OPERATION OF COMPRESSED AIR EQUIPMENT
And Here's Why . . .

Air operated tools, instruments, processes and pneumatic controls have one thing in common . . . they *thrive on clean, dry air.* With few exceptions, all breakdowns, repairs, and loss of productive time can be avoided by filtering air and other gases through Staynew Pipe Line Filters. Wherever air must be kept clean and dry for industrial equipment, filter it with Staynew.

Send for complete illustrated catalog on Staynew Pipe Line Filters. Write today!

A. Heavy pressed steel head and body.
B. Deflector cup.
C. Louvred housing.
D. Radial fin filter insert.
E. Large capacity base.

*MODEL CPH Horizontal Pressure Type
MODEL CP Vertical Pressure Type
MODEL CVH Vacuum Type
*MODEL AAPH Absorption Type
MODEL HPH High Pressure Type
*Also available in swing bolt construction for easy inspection and servicing.

Representatives in Principal Cities
DOLLINGER STAYNEW FILTERS
DOLLINGER CORPORATION
49 Centre Pk., Rochester 3, N. Y.
ALL TYPES OF FILTERS FOR EVERY INDUSTRIAL NEED

For more details circle NED-4437 on enclosed inquiry slip

BETTER SEEING TOOLS FOR INDUSTRY

FOSTORIA LOCALITES INCREASE WORKERS' EFFICIENCY

Light the Vital Seeing Zone on Machine Tools, Inspection and Assembly Benches

MODEL 3267-H-174
$6.12 EACH in pkg. of 6 Single Units $7.65 ea.
Overall length 32¾". Three instantly adjustable joints. Flat oblong base for machine screw mounting.

- **Rugged Construction** withstands vibration and rough handling
- **Instantly Adjustable** with flexible ball and socket joints
- **Baked Enamel Finish** — Exterior, Smooth Gray — Reflector Interior high temperature White
- **Reflector** accommodates 100 watt or any A-19 or A-21 medium screw base lamp
- **Wired Complete** with switch socket and 8 ft. oil resistant cord and moulded plug

WRITE FOR COMPLETE CATALOG of Localite models with various type reflectors, arms and bases for every industrial use.

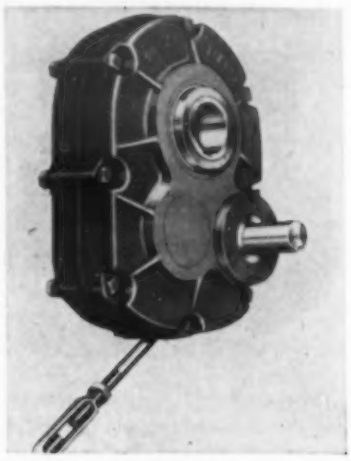
THE FOSTORIA PRESSED STEEL CORPORATION
FOSTORIA, OHIO

Localites are available through electrical wholesalers everywhere.

LOCALITE fostoria for Light ON the Job

For more details circle NED-4438 on enclosed inquiry slip

SPEED REDUCER has capacity up to 43 hp



Output speeds from 12 to 110 rpm are provided by No. 7 Torque-Arm double reduction shaft-mounted speed reducer with capacity to 43 hp. Reducer is anchored with torque-arm which fastens to any fixed object. Turnbuckle permits fast, easy adjustment of belt tension. No foundation or flexible couplings are needed. New Tri-Matic overload release is applicable to this reducer and to all other models in company's Torque-Arm line. Made by **Dodge Mfg. Corp.**, 600 S. Union St., Mishawaka, Ind.

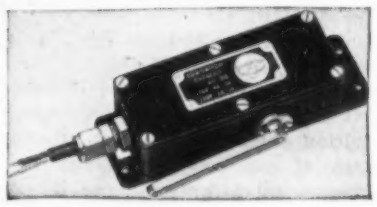
For more details circle NED-4439 on enclosed inquiry slip

HEAVY DUTY TURNING ROLLS handle 75-ton 14-ft diameter vessels

With one power unit and two idler units, heavy duty model M-1500 turning roll can handle vessels with up to 14-ft diameters and has capacity of 75 tons. Design features compact, three-in-one motor-variable speed transmission-gear reducer set with a range from 5 to 40 in. per minute, totally enclosed direct drives worm gear reducers and antifriction bearings. The 5-hp motor is protected with reversing magnetic starter and antijog reversing relays. Rubber tired wheels have 22-in. diameters and a 21-in. face. Made by **Reed Engineering Co.**, Dept. NED, P. O. Box 415, Carthage, Mo.

For more details circle NED-4440 on enclosed inquiry slip

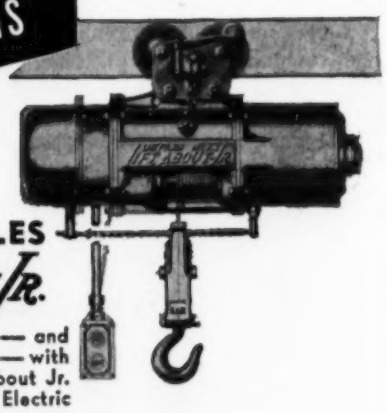
HEAVY DUTY SWITCH actuates electric counters



Designed to withstand operations numbering in the hundreds of millions, this heavy duty electric switch can be operated by reciprocal motion or by complete revolution of a shaft. Although developed for electric counter actuation, it is adaptable to other applications. Reciprocal operations require an arm movement of 20 degrees minimum and 340 degrees maximum. In rotary motion, the switch is closed 140 degrees and open 220 degrees of each revolution. Arm position is adjustable. Operating torque required is 2 oz-in. minimum. Contact swings are nickel silver with silver points. Rating is 10 amp at 115 v or 5 amp at 230 v ac. Switch measures 6 x 1⅞ x 1 9/16 in. and can be furnished with measuring wheels. Made by **Production Instrument Co.**, 700-12 W. Jackson Blvd., Chicago 6, Ill.

For more details circle NED-4441 on enclosed inquiry slip

SOLVES MANPOWER PROBLEMS



SHEPARD NILES
LIFT ABOUT Jr.

One man replaces many — and moves more goods faster — with the Shepard Niles Lift About Jr. This lightweight, low cost Electric Hoist frees valuable floor space, puts waste ceiling area to work.

Loads of 500 or 1,000 lbs. are handled easily by an older man, woman or youth.

Learn how the Lift About Jr. fits into your production picture by calling in the Shepard Niles representative. He'll make sure you get the right capacity and controls for your handling job. Write today for Bulletin 127 or 171 and ask to have a representative stop by.

Specialists in loads through-the-air since 1903.

SHEPARD NILES
CRANE AND HOIST CORPORATION
1810 SCHUYLER AVE., MONTOUR FALLS, N. Y.

For more details circle NED-4442 on enclosed inquiry slip

FOR THE BEST IN FLEXIBLE CORDS SPECIFY DYNAPRENE

DYNAPRENE has all the good qualities of neoprene with extra long life added. This extra life or toughness or abrasion resistance is brought about by the special neoprene compound developed by experienced research engineers at Whitney Blake. This compound, cured by the continuous vulcanizing process that assures accurate centering, correct jacket thickness and even cure, is impervious to all those harmful conditions and substances that shorten the life of rubber-jacketed cords.

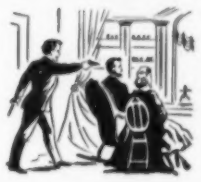
Be sure to specify Whitney Blake SO, SJO or SV-type neoprene jacket for your flexible cord requirements.

WHITNEY BLAKE COMPANY
WELL BUILT WIRES SINCE 1899
NEW HAVEN 14, CONNECTICUT

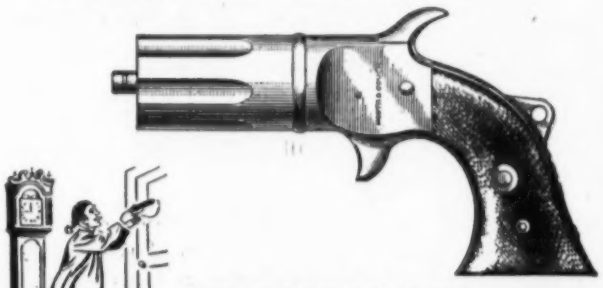
For more details circle NED-4443 on enclosed inquiry slip

Famous Guns

Deringer Percussion Pistol Model 1843



Product of Henry Deringer of Philadelphia. Deringer's large caliber, short barreled pocket pistols were so popular that others imitated them—calling them "derringers". John Wilkes Booth used a Deringer to assassinate Lincoln.



Trap or Doorjamb Pistol Caliber .31

Made by North & Couch, Middletown, Conn. This lethal little device protected householders against burglars. Fixed to the doorjamb, with a cord running from muzzle rod to door, the pistol fired all its barrels into any intruder.

Weller Instant-heating Soldering Gun

for light or heavy work. Dual heat greatly increases tip life. Switch instantly to high or low heat as job requires. Pre-focused spotlights end "blind soldering". Exclusive tip-fastening arrangement assures full, constant heat. High-impact plastic housing. Perfect balance. Low-cost replaceable tips. Pays for itself in a few months. See at your Distributor or write for Bulletin direct.

Get SOLDERING TIPS, new Weller Handy Guide to faster, easier soldering. 20 pages fully illustrated. Price 10c at your Distributor or order direct.

Weller BETTER FROM GRIP TO TIP!

SOLDERING GUNS 809 Packer Street, Easton, Pa.
The Finest Soldering Tool for the Finest Craftsmen

For more details circle NED-4444 on enclosed inquiry slip

42 STOCK SIZES

SOLID STEEL COLLARS

Precision machined for shafts from 3/16" to 3" diameter inclusive. Fitted with the famous self-locking UNBRAKO Socket Set Screw—the screw that positively won't work loose. Write for descriptive literature and the name of your local distributor. STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

HALLOWELL POWER TRANSMISSION DIVISION

SPS

JENKINTOWN PENNSYLVANIA

For more details circle NED-4445 on enclosed inquiry slip

DIEHARD'S CASE ISN'T SO UNUSUAL AS YOU MAY THINK!

In all types of industry West representatives hear comments like "our situation is a special one" . . . "an insecticide is bound to impair the quality of our product" . . . and — stranger still — "we don't have any insect problem here!"

Vaposector was formulated for the realist who *has* an insect problem and wants to get rid of it — fast! It's fully three times as concentrated as the standard Grade AA spray . . . yet there's no danger of contamination or odor when used according to directions. Vaposector controls insects by "double penetration". When used with West spraying equipment, it becomes a "dry fog" that *penetrates* the most remote crevice . . . then *penetrates* the insect's outer covering for a permanent kill. There's no place to hide. No time to escape. A Vaposector demonstration has often revealed dead insects in numbers never thought possible — simply because they live and multiply in unseen cracks and crevices.

Vaposector gives more positive control value per gallon than any competitive product. It breaks down into such minute droplets when atomized with specially designed West equipment, that only one ounce is needed to control flying insects in 1000 cubic feet . . . only two ounces for crawling insects. Compare it with an ordinary mill spray and you'll find Vaposector is over *four times as economical in use!* West can supply Vaposector as well as special mill sprays and fumigants . . . residual and contact insecticides . . . spraying equipment — a *complete insect control program* tailored to your exact needs! For further information, write Dept. 16.

WEST DISINFECTING Company

42-16 WEST STREET, LONG ISLAND CITY 1, N. Y.

For more details circle NED-4446 on enclosed inquiry slip

CHUCK JAW SET
features full tooth adjustment

Precision adjustment of American Standard chucks having serrated type jaws is possible through use of Micro Jaw-Set designed for use with any manual or air operated chuck. Single adjusting screw controls radial movement of top jaw in such manner as to give full tooth adjustment in either direction. Device also allows precision adjustment of individual top jaws without time-consuming unlocking and locking of individual operating or set screws. Existing top jaw equipment of other type chucks can usually be machined to fit American Standard serrated chucks in combination with jaw set. As component of air operated chucks, device aids in reducing setup time. It is available for chucks ranging in diameters from 15 to 36 in. and can be incorporated as optional equipment for air operated chucks in diameters from 8 to 36 in. Made by **Whiton Machine Co.**, 542 Howard St., New London, Conn.

For more details circle NED-4447 on enclosed inquiry slip

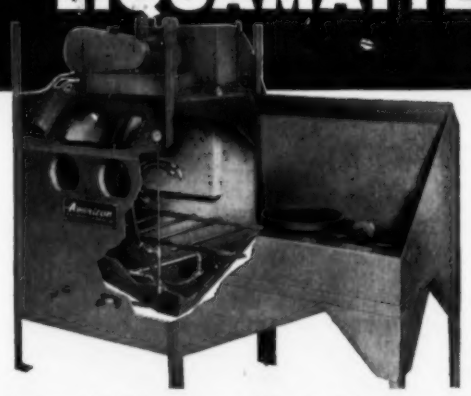
PROPORTIONAL CONTROLLERS
apply to simple batch, as well as complex continuous type processes

Designed for precise control of pressure, temperature, liquid level or rate-of-flow, 60,000 series controller is available in time-recording or indicating models. Instrument can provide proportional control in which it has direct or reverse proportional-position action for continuous linear relationship between controlled variable and output pressure. In proportional-reset control applications, it combines proportional-position action with proportional-speed floating action. Two-position action is provided in on-off control, and in differential gap control, instrument combines two-position action with differential gap proportional action.

Supplementary units are a pneumatic-set for remote adjustment of control point, time cycle which features cam drive independent of chart drive for recording several cycles on one chart, differential in which instrument indicates or records both the independent and dependent variable and the manual control unit on subpanel with manifold connected to instrument without pressure fittings. Ranges of instrument for pressure control go up to 5000 psi; temperature, between −40 and 1000° F; flow, between 0-20 and 0-200 in. of water; and liquid level control, up to 50 ft of water. Made by **Mason-Neilan Regulator Co.**, 1190 Adams St., Boston 24, Mass.

For more details circle NED-4448 on enclosed inquiry slip

NOW...
close tolerance finishes in seconds in the new LIQUAMATTE



Close tolerance finishing is now done in a fraction of the time by Liquamatte Wet Blasting. Liquamatte's simplified design overcomes many operating difficulties often found in wet blasting. It is push-button controlled. An exclusive vertical pump eliminates leakage, shaft wear and plugging troubles. The hopper is completely drained in seconds without bailing. *Send for descriptive Bulletin No. 23.*

American LIQUAMATTE WET BLASTING

WHEELABRATOR & EQUIPMENT CORP.

508 S. Byrkit St., Mishawaka 8, Ind.

For more details circle NED-4449 on enclosed inquiry slip

FAWICK ROTORSEALS
Performance Proved in THOUSANDS OF INSTALLATIONS

Machine problems requiring transmission of air or liquids from stationary to rotating machine members are best solved with FAWICK ROTORSEALS.

Precision ROTORSEALS are available in single and multiple passage units, insuring dependable sealing of air, liquids or gases under pressure. They are equally effective in vacuum applications and may be operated continuously or intermittently in either direction.

FAWICK AIRFLEX CO., INC.

9919 CLINTON ROAD • CLEVELAND 11, OHIO

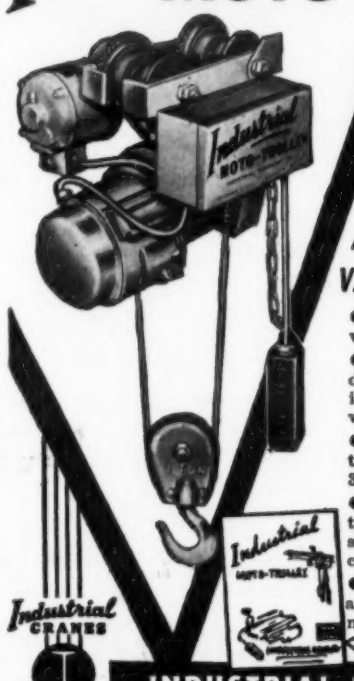
For complete information on a FAWICK ROTORSEAL to suit your specific application, write to the Home Office, Cleveland, Ohio.

FAWICK Airflex

INDUSTRIAL CLUTCHES AND BRAKES

For more details circle NED-4450 on enclosed inquiry slip

Industrial MOTO-TROLLEY



MAY BE ATTACHED TO YOUR STANDARD ELECTRIC HOIST . . .

ADJUSTABLE TO ACCOMMODATE WIDE VARIETY OF BEAM SIZES

- Crown-tread machine steel wheels with hardened drivers.
- Each wheel equipped with double-row precision ball bearings and removable-head axle with Alemite grease fittings.
- Powered by a crane-duty high-torque totally enclosed motor of 30 minute 55 degree rating.
- Magnetic contact panel has transformer to reduce voltage in single speed push button control circuit.
- 4-button control station operates single speed trolley and hoist motions.

Write for Literature

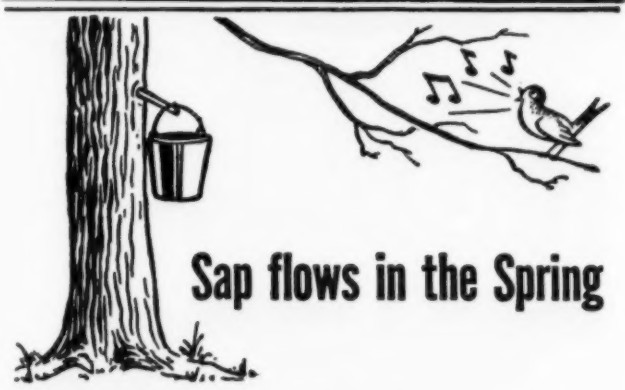
Industrial CRANES

INDUSTRIAL EQUIPMENT CO.

327 NORTH ADA STREET CHICAGO 7, ILLINOIS

Representatives in Principal Cities.

For more details circle NED-4451 on enclosed inquiry slip



Sap flows in the Spring

When the weather warms up, sap and pitch begin to flow. Add heat to your viscous materials and they will flow all year round.

Jacketed Tee

Jacketed 3-Way Cock

With Parks-Cramer jacketed pipe and fittings, heated with hot oil, steam, or hot water (depending on the product handled) you can make asphalt, chocolate, lard, molasses, sulphur, TNT, varnishes, waxes, etc., flow like water.

Write now for Bulletin 152

Parks-Cramer Company

ENGINEERS and CONTRACTORS

Fitchburg, Massachusetts

For more details circle NED-4452 on enclosed inquiry slip

Time Savings UP TO 50% IN ABRASIVE FINISHING!

You know the cleaning, cushioning and polishing advantages of rubber, the finishing actions of abrasives. Use the advantages of both in Brightboy—for working lightweight and semi-precious metals, plastics, laminated materials, wood and glass. *Combine burring, finishing, cleaning and polishing into one time saving operation!*

BRIGHTBOY SAVES PRODUCTION AND MAINTENANCE TIME

Bridges the gap between the rough grind and the buff; takes up where coarse abrasives leave off; works to close tolerances; can be shaped to contour. Produces a wide variety of conventional and special finishes and patterns; frequently the final polish. Requires no before-use preparation or dressing; no skilled labor to handle it.

A FEW OF MANY GENERAL USES

Removing light digs, tool and heat marks. Cleaning welded and soldered joints. Finishing dies and molds. Burring stampings, castings, machined parts. Maintaining tools, production and plant equipment.

Ask your dealer for the informative Brightboy Catalog Manual outlining uses and adaptations. Write the Brightboy Service Department on any problem where finishing is involved.

BRIGHTBOY INDUSTRIAL DIVISION
Weldon Roberts Rubber Co.
6th Ave. & No. 13th Street
Newark 7, N. J.

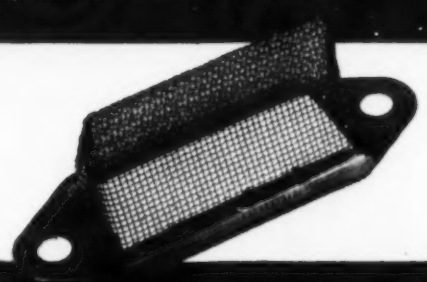
WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

America's Pioneer Manufacturer of Rubber-Bonded Abrasives

For more details circle NED-4453 on enclosed inquiry slip

NEWARK Fabricated WIRE CLOTH PARTS

Available — a well-equipped plant with highly experienced fabricators.



Available — mesh cloth and space cloth made in our own plant.

All under one roof

Do you require parts made with one or more pieces of mesh cloth or space cloth — anything from 4 inch openings down to 325 mesh (105,625 holes/sq. in.)?

Our experienced fabricating service should be of value. We are in position to handle volume order business and, if desired, will be glad to help in designing the part requiring the metallic cloth. We know how to insert and fasten metallic cloth to get best results. We carry many standard sizes of wire cloth in stock. We have ample loom facilities to weave special cloths if necessary. We can handle any wire of any malleable metal.

This fabricated parts division of our business has grown by leaps and bounds. We have had many repeat orders. It could be due to the quality of wire cloth used and the care with which this cloth is assembled into the parts being fabricated.

NEWARK for ACCURACY

Ask for General Catalog "D".

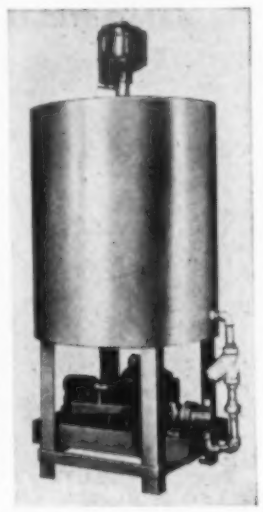
Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

Philadelphia 3, Penna. 1311 Widener Bldg. San Francisco, Calif. 3100 19th St. Chicago, Ill. 20 N. Wacker Dr. New Orleans, La. 520 Maritime Bldg. Los Angeles, Calif. 1400 So. Alameda St. Houston, Texas P. O. Box 1970

For more details circle NED-4454 on enclosed inquiry slip

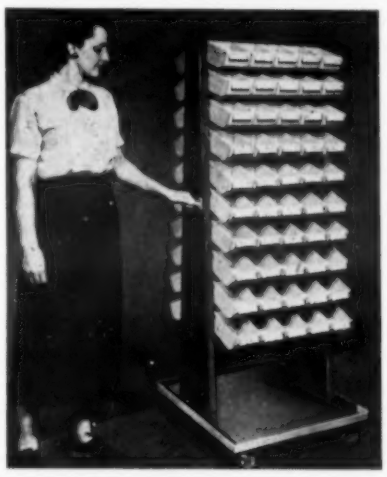
CHEMICAL FEED UNIT delivers liquids in desired amounts



Self-contained chemical feed packaged unit which delivers liquids in desired amounts under pressure is particularly suited for feeding boiler water treatment as well as delivering chemicals and other fluids for processing. Chemical reservoir tank of this extra heavy Baco unit is of welded steel construction and available in 50 or 100-gal capacities. Proportioning pump can be designed for various feed rates. Motor-driven agitator assures completely mixed fluids at all times, and stainless steel strainer is provided between suction side of pump and the tank. Pump is mounted below tank to minimize air binding and to maintain positive suction head. A duplex-pump model with divided tank is also available. Both types are supplied with all necessary piping and are ready for connection. Made by **Bird-Archer Co.**, 4339 N. American St., Philadelphia 40, Pa.

For more details circle NED-4455 on enclosed inquiry slip

PORTABLE STOCKING UNIT has 100 individual containers



Mounted on four free-rolling wheels, Porto No. 5050-W stocking unit transports small parts and materials from job to job, machine to machine or holds them in stockrooms without transferring from containers to bins. Portable unit has 100 individual containers arranged in ten rows of five containers on each of two sides. Each container can be lifted out for stock rotation, stock replenishment or cleaning. All parts are tilted forward. Containers have rounded bottoms for ease in picking out parts, and tag holder for labels, part numbers and specifications. Unit is 62½ in. high and 21⅝ in square. Made by **Service Parts Systems, Inc.**, Dept. 22, Charlevoix Ave., Grosse Pointe 30, Mich.

For more details circle NED-4456 on enclosed inquiry slip

DO YOU KNOW? Meat will be hauled regularly for the first time this Spring in mechanical refrigerator cars. Twenty-five Thermo King cars are being placed in service between the midwestern plants of John Morrell & Co. and points in Florida. Mechanically refrigerated railroad cars are fully automatic, and any desired temperature can be maintained by setting of dial. Gasoline engine driven refrigeration units are made by Thermo-King Railway Corp., 44 S. Twelfth St., Minneapolis 3, Minn.

For more details circle NED-4457 on enclosed inquiry slip

GET BOTH-

top performance . . . economy with "RC" Flexible Couplings

"RC" Coupling—in 30 sizes, ⅜ to 12 in. bore.

Only the Link-Belt "RC" Flexible Coupling gives you single chain simplicity plus divided rollers. Divided rollers equalize the load . . . maintain proper balance at high speeds . . . adjust to reasonable misalignment and end float. There's a Link-Belt Roller Chain Coupling for ratings from fractional to 1000 hp. For complete information, write for "RC" Coupling Folder 2363.

LINK-BELT

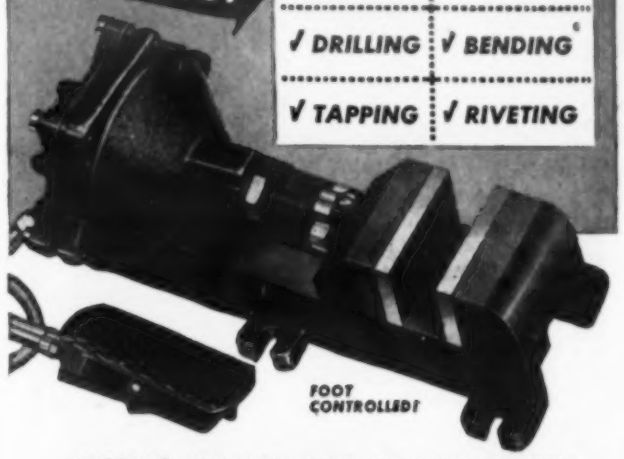
"RC" FLEXIBLE COUPLINGS

LINK-BELT COMPANY: Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa), Sydney (Australia). Offices, Factory Branch Stores and Distributors in Principal Cities. 12,797

For more details circle NED-4458 on enclosed inquiry slip

SPEEDY AIR VISE

SPEEDS UP ✓ MILLING ✓ PUNCHING ✓ DRILLING ✓ BENDING ✓ TAPPING ✓ RIVETING



GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and Fittings.....only **$29.90**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

For more details circle NED-4459 on enclosed inquiry slip

This Revolutionary NEW GRIP-STRUT GRATING gives MAXIMUM STRENGTH with MINIMUM WEIGHT

RUGGED LOW COST NON-SKID VERSATILE

Not welded. Vertical members joined by integral saddles—side channel members and grating are a single unit—combines great strength with light weight. Simplifies installation—greatly reduces costs of construction. Easily replaces old or obsolete types of grating. Feature for feature, Grip Strut has a lower initial cost factor than any other type. Available in steel or aluminum.

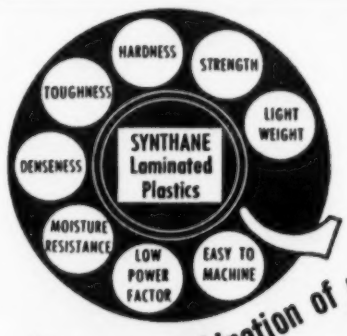
WRITE FOR FULL DETAILS

GLOBE *The* **GLOBE** *Company*

MANUFACTURERS SINCE 1914

4002 S. PRINCETON • CHICAGO 9, ILL.

For more details circle NED-4460 on enclosed inquiry slip



Dial the combination of properties you need

Synthane laminated plastics have a wide variety of valuable mechanical, chemical and electrical properties—and have them in combination. Synthane combines, in one easy-to-machine material, light-weight, strength, chemical and moisture resistance, hardness, toughness, denseness, high dielectric strength, high dielectric constant and low power factor. And many more. Why not find out more about this unusual material today? Just clip and mail the coupon for the complete Synthane Catalog.

SYNTHANE

Manufacturers of laminated plastics
SHEETS
RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
FABRICATED PARTS

SYNTHANE CORPORATION
North East River Road, Oaks, Pa.
Gentlemen:
Please send me the new Synthane Catalog at once.
*Name*_____
*Address*_____
*City*_____ *Zone*____ *State*_____

For more details circle NED-4461 on enclosed inquiry slip

A WIDE RANGE INDICATING CONTROL

TYPE E8N

The type E8N indicating control is ideal for installations where an exact temperature reading must be readily available at all times. It is a broad range, precision-built unit that shows the exact temperature of the thermal bulb at all times. The E8N is compensated accurately for wide ambient temperature changes, is simple in design and contains no delicate mechanisms. Various models are available covering ranges of 300° F to 600° F between limits of -150° F to 600° F. On-off differentials available as low as .25° F. Complete details and electrical specifications are contained in bulletin #4-1, write for it today.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

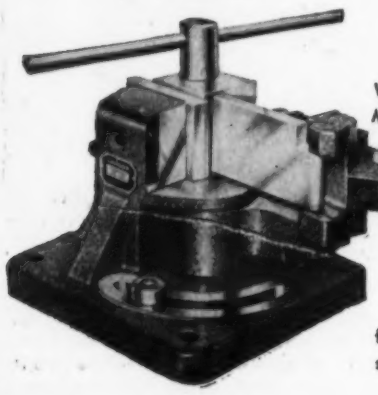
STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle NED-4462 on enclosed inquiry slip ▲

SAMSON ANGLE BENDER

with quick grip clamping device

Hardened steel replaceable jaws • Stop gauge for setting angles • Quick adjustment for thickness • Fast • Accurate • Easy to operate



IMMEDIATE SHIPMENT

Write for catalog of Metal Working Equipment

$69.30

f.o.b. New York, subject to change

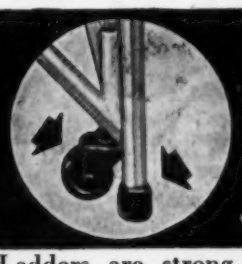
Capacity:
3" x 3/16" flats | ½" rounds
½" squares | 2½" x 2½" x ¼" angles

JULIUS BLUM & CO., Inc.
Established 1910
536 West 22nd St., New York 11 • WAtkins 9-7042

▲ For more details circle NED-4463 on enclosed inquiry slip ▲

IN EVERY BALLYMORE LADDER *Safety* IS BUILT-IN, AUTOMATIC

ROLLING CASTERS CARRY LADDER WHEN NOT IN USE



RUBBER TIPPED LEGS "LOCK" TO FLOOR WHEN IN USE

Ballymore Ladders are strong and sturdy. Mounted on smooth running ball-bearing casters they are easily pushed about, yet when in use are perfectly stable, can't roll or kick-out because the weight of a person on the ladder retracts the casters, puts the load onto widely spaced rubber tipped legs. Workers have a positive sense of security that gives them absolute freedom of action.

That's why Ballymore Ladders save time, speed up work, prevent accidents and fear of accidents . . . save money.

Various types, single to eight steps, with and without hand rails.

WRITE TODAY FOR COMPLETE CATALOG

BALLYMORE COMPANY
WAYNE 3, PENNSYLVANIA
Safety Steel Step-Ladders for Every Need

▲ For more details circle NED-4464 on enclosed inquiry slip ▲

FIRE EXTINGUISHING SYSTEMS packaged systems supplied for automatic, built-in installation

Packaged automatic carbon dioxide fire extinguishing systems are now available to protect against normal, and some special, industrial flammable liquid hazards. Components of these total-flooding and local-application systems are Underwriters' Laboratories approved and can be furnished in six sizes for protection of spaces from 800 to 6000 cu ft in size. Each package contains temperature-rate-of-rise fire detectors and connector tubing, automatic control heads, discharge heads, Multijet nozzles and cylinder-supporting frame. Cylinders are shipped separately.

Available accessory equipment which can be ordered separately includes remote control pull boxes, pressure-operated trips for closing doors and windows, switches for shutting down ventilation and machinery, alarm gongs and pressure-operated sirens. Systems are self-contained and require no outside power source. Once discharged, they can be put back in operating condition by recharging cylinders and resetting head. Manufactured by **Walter Kidde & Co.**, Dept. A, 675 Main St., Belleville 9, N. J.

▲ For more details circle NED-4465 on enclosed inquiry slip ▲

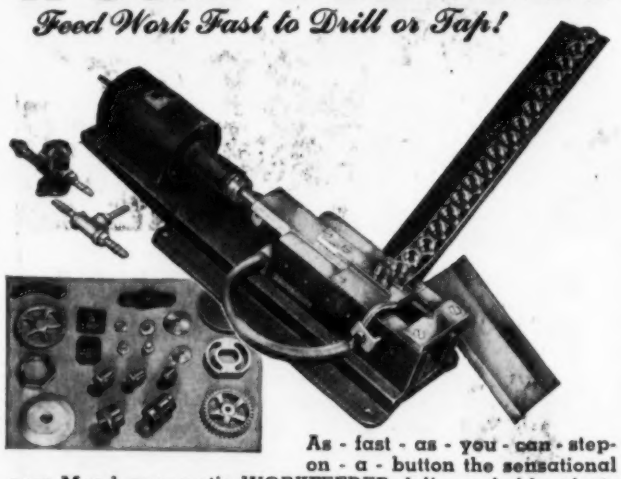
HIGH INTENSITY SPOTLIGHT casts 45,000 beam candle power

Applications for Dyna-Ray sealed-beam spotlight capable of 45,000 beam candle power illumination in small spot can range from mounting on lathes and machine tools for close tolerance production to production line machinery and inspection tables. At 5 ft, type M-114-S spotlight has beam spread of 4½ by 5½ degrees and casts 6-in. diameter spot with illumination intensity of 1000 foot-candles on target. Type M-114-W casts narrow slit beam with spread of 40 by 5 degrees at 8500 beam candle power, while type M-114-F beam spread is 80 by 20 degrees (rectangular) with 500 beam candlepower. Lights plug into 110-v ac line. Its low voltage light source operates at 6 v, 30 w. Mounting attachments facilitate positioning spot almost anywhere. Step-down transformer, only 2½ x 3½ in., provides close control of voltage for maximum lamp life and is connected to lamp by 10-ft cord. A 6-ft line connects transformer to power outlets for extension total of 16 ft. Made by **Dormitzer Electric & Mfg. Co.**, Dept. DB, 5 Hadley St., Cambridge, Mass.

▲ For more details circle NED-4466 on enclosed inquiry slip ▲

Boost Output with MEAD WORK FEEDERS

Feed Work Fast to Drill or Tap!



As - fast - as - you - can - step-on - a - button the sensational new Mead pneumatic WORKFEEDER delivers, holds, ejects small parts to be drilled, reamed or tapped. Accommodates stampings, castings, screw machine parts, etc. Adjustable to sizes up to 3". Foot automatic control; operator's left hand is free to keep hopper loaded. Write for new Mead AIR POWER Catalog describing "Mead Family" of air operated fixtures and devices.

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE., DEPT. NA-52, CHICAGO 41, ILL.

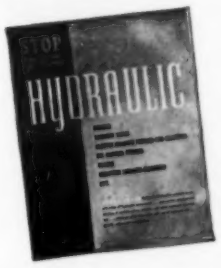
▲ For more details circle NED-4467 on enclosed inquiry slip ▲

STOP downtime, costly repairs with World-Famous HONAN-CRANE Oil Purifiers

70% OF TROUBLE ON HYDRAULIC EQUIPMENT IS CAUSED BY OIL CONTAMINATION AND FAILURE

Honan-Crane Purifiers prevent trouble before it starts in hydraulic installations by keeping oil clean and free from damaging contamination. When used to replace ineffective methods or where no purification program has been practiced previously, 50% reduction in hydraulic maintenance costs and 4 to 5 times the former safe oil life are common experiences.

Honan-Crane Purifiers prevent excessive wear of hydraulic pump parts . . . prevent clogging and sticking of control valves, pistons and other hydraulic mechanisms . . . greatly extend the safe-use life of hydraulic oils. Specify Honan-Crane Oil Purification for your hydraulic equipment. Proven by years of dependable service throughout the world . . . there's no reason to settle for less!



FREE! 8-page "Hydraulic Bulletin" with case histories describing profitable advantages of Honan-Crane Purification in many critical hydraulic applications. Write for your copy!

▲ For more details circle NED-4468 on enclosed inquiry slip ▲

MATHEWS CONVEYERS

A TYPE FOR EVERY PACKAGE HANDLING JOB

- WHEEL
- LIVE ROLLER
- SPECIAL CONVEYING MACHINERY
- BELT
- ROLLER
- TROLLEY
- PORTABLE
- ELEVATING

Write today

MATHEWS CONVEYOR
GENERAL OFFICE
MATHEWS CONVEYER COMPANY
PACIFIC COAST
MATHEWS CONVEYER COMPANY, WEST COAST
CANADIAN DIVISION
MATHEWS CONVEYER COMPANY, LTD.
Engineering Offices or Sales Agencies in Principal

▲ For more details circle NED-4469 on enclosed inquiry slip ▲

The Work-O-Matic* Box GOES ALL THE WAY to save you time and money!

IN production operations, the Work-O-Matic box pictured here is boosting output up to 50% in job after job. But that's not the *whole* story!

For example, look how it greatly simplifies and speeds dumping or disposal. Even materials normally hard to discharge are readily dumped, because *this* box opens to almost 90°. What's more, the discharge point remains constant throughout the dumping operation at any point within the lifting range of the fork truck.

Get *all* the facts—on increased production, improved handling and storage and faster, complete-control dumping. Write to The Union Metal Manufacturing Company, Canton 5, Ohio.

*Patent No. 2,[illegible] other patents

UNION METAL
Materials Handling Equipment

▲ For more details circle NED-4470 on enclosed inquiry slip ▲

550 gallon hydraulic system of world's largest injection molding press (300 oz.) gets Honan-Crane oil purification regularly at Amos Molded Plastics, Edinburg, Indiana. Hydraulic equipment at Amos Plastics has been protected by Honan-Crane Purifiers since 1942.

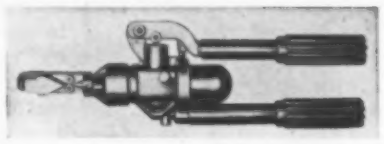
Honan-Crane Corporation
405 Wabash Avenue, Lebanon, Indiana
A Subsidiary of
Houdaille-Hershey Corp.

WORLD'S LEADING OIL FILTER MANUFACTURER

© 1952 HONAN-CRANE CORP.

NED-4[illegible] on enclosed inquiry slip ▲

HAND-OPERATED GUILLOTINE cuts ½-in. reinforcing rod



Weighing only 12 lb and measuring 21 in. long, model 200-A hydraulic guillotine cutter is able to cut up to ½-in. reinforcing rod with ease. Pressure applied is 8500 psi. Dual ratio pump incorporated combines rapid traverse with high power to minimize cutting time. Reduced operator effort minimizes tendency of the operator to twist the unit while cutting, this action being a major cause of cutter blade breakage. Alloy tool steel blades are easily resharpened. Made by **Manco Mfg. Co.,** Washington St., Bradley, Ill.

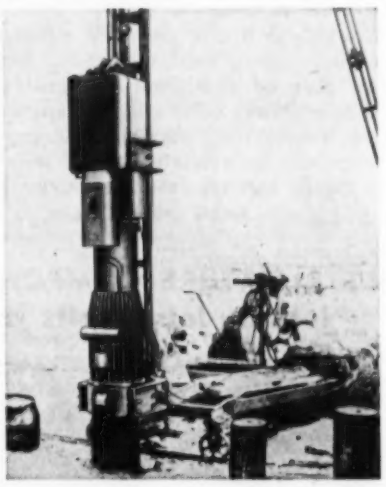
▲ For more details circle **NED-4471** on enclosed inquiry slip ▲

TRACTOR CAB protects driver in all weather

Full weather protection is afforded by Bruco tractor cab designed to fit Ford and Ferguson tractors, and with some changes, other makes as well. Cab is of all steel construction with plywood metal-covered doors which are removable for summer use. Windows are of safety glass except for rear drop curtain which has a celluloid window. Cab also has vacuum type windshield wiper, is finished in gray enamel and is shipped crated. Made by **Brumbaugh Body Co.,** Dept. N, 100 W. Plank Rd., Altoona, Pa.

▲ For more details circle **NED-4472** on enclosed inquiry slip ▲

DIESEL PILE HAMMER is completely self-contained unit



Completely self-contained and requiring no auxiliary power, model 3000 DPH diesel pile hammer can be handled by gasoline or diesel engine driven crane, or can be furnished with rig, leads and hoisting engine. Capable of driving sheet steel, timber or concrete piling, the hammer operates at 110 blows per minute. The 1200-lb ram delivers 3000 ft-lb per stroke. Force of each blow is remotely controlled by the operator, from nonimpact idling to full power, through a hydraulic system. Complete unit is 9 ft long by 18 in. wide. It fits in 18½-in. leads and weighs 3000 lb. Made by **Syntron Co.,** 405 Lexington Ave., Homer City, Pa.

▲ For more details circle **NED-4473** on enclosed inquiry slip ▲

Write today for complete information

CONVEYERS

GENERAL OFFICES
ANY . . . ELLWOOD CITY, PENNSYLVANIA
PACIFIC COAST DIVISION
ANY WEST COAST . . SAN CARLOS, CALIFORNIA
CANADIAN DIVISION
ANY, LTD. . . . . PORT HOPE, ONTARIO
Offices in Principal American and Canadian Cities

NED-4[illegible] on enclosed inquiry slip ▲

money!

Patent No. [illegible] 445,088. Other patents pending

Photos above show patented Work-O-Matic box closed and partially open in smooth, complete-control dumping operation. Inset shows same unit saving time and motion in work-feeding production operation.

NED-4[illegible] on enclosed inquiry slip ▲

* Reg. U. S. Pat. Off.

▲ For more details circle **NED-4474** on enclosed inquiry slip ▲

throw your wrench away

CONNECT or DISCONNECT *any* fluid or electric line *without a wrench*

Join or separate any line with your fingers. You do it in seconds instead of minutes, when you use leakproof WIGGINS Inst-O-Matic couplings. We design to meet your requirements.

SUBMIT YOUR PROBLEM. WIGGINS Inst-O-Matic couplings can reduce your costs. Write today. There's a qualified representative near you.

Wiggins
Aircraft Division
E. B. WIGGINS OIL TOOL CO. Inc.
3424 E. Olympic Blvd., Los Angeles 23

INST-O-MATIC COUPLINGS

▲ For more details circle **NED-4475** on enclosed inquiry slip ▲

Put all your new machinery on ISOMODE* PADS

1. For faster installation
2. For quieter plant
3. For less maintenance

That's right—vibration absorbing Isomode* Pads are the easy way to save time, labor and operating costs with new equipment and in new plants.

Engineered by vibration specialists, these 5/16" pads have proved their ability to absorb disturbance normally transmitted to floor—even shocks from large punch presses! Locate machines *anywhere*. Usually no need for bolting. Simply cut to size and install under legs or base.

And the results are plain to see: Less machine maintenance, less noise, reduced building damage. Write for full facts. *Reg. U. S. Pat. Off.

THE MB MANUFACTURING COMPANY, INC.
1066 State St., New Haven 11, Conn.

▲ For more details circle **NED-4476** on enclosed inquiry slip ▲

Increased Insulation
BETTER CONNECTIONS
JONES BARRIER TERMINAL STRIPS

Leakage path is increased—direct shorts from frayed terminal wires prevented by bakelite barriers placed between terminals. Binder screws and terminals brass, nickel-plated. Insulation, black molded bakelite. Finest construction. Add much to equipment's effect.

Jones Means Proven Quality

Illustrated: Screw Terminals—Screw and Solder Terminals—Screw Terminal above Panel with Solder Terminal below. Every type of connection.

Six series meet every requirement: No. 140, 5-40 screws; No. 141, 6-32 screws; No. 142, 8-32 screws; No. 150, 10-32 screws; No. 151, 12-32 screws; No. 152, ¼-28 screws.

Catalog No. 18 lists complete line of Barrier Strips, and other Jones Electrical Connecting Devices. Send for your copy.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle **NED-4477** on enclosed inquiry slip ▲

new! revolutionary!

Pilot-Master

AIR CONTROL VALVES

Ingenious Design • Many Applications

New piston-operated poppet design in 2, 3 and 4-way Master and Pilot-Master Valves—also 10 new Pilot Valves for remote control.

ADVANTAGES

- Unique Removable Cartridge
- Fewer Valves to Stock
- Fewer Parts to Stock
- All-Electric or All-Pneumatic Hook-Ups

GET THE FULL STORY

All Sizes ¼" to 1¼"

Every Design Engineer and Tooling Specialist will want Bulletin 231—just off the press. Contains full details on the complete P-M line.

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave., Chicago 24, Ill.

For more details circle NED-4478 on enclosed inquiry slip

NEW DISC CLUTCH

for gasoline engines, electric motors, speed reducers, etc.

operates with light pressure
picks up load without grab

integral V-belt pulley

integral sprocket

cut-off coupling or sleeve

easy manual operation

adjustable

powerful

For stub or through shaft application, these new Type K clutches—rated up to .8 HP at 100 rpm—have generous safety factors throughout to stand severest service. Threaded steel adjuster permits precise easy adjustments to assure maximum capacity and minimum engaging pressure. Clutch locks itself in engaged position.

Write for new descriptive Bulletin K-1, including complete specifications.

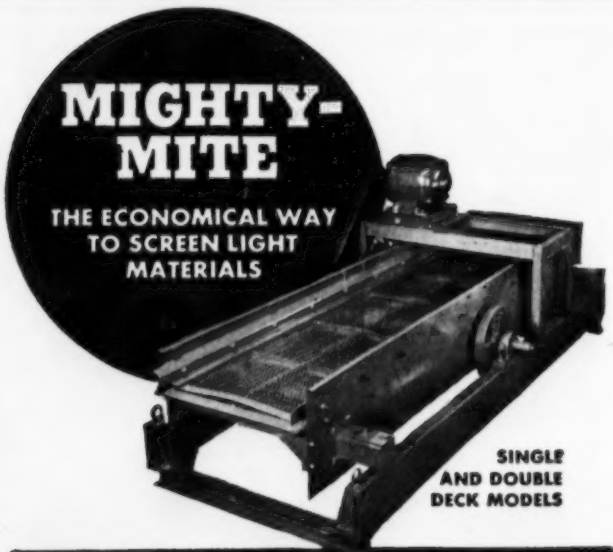
THE EDGEMONT MACHINE CO.

2200 HOME AVENUE • DAYTON 1, OHIO

For more details circle NED-4479 on enclosed inquiry slip

MIGHTY-MITE

THE ECONOMICAL WAY TO SCREEN LIGHT MATERIALS



SINGLE AND DOUBLE DECK MODELS

Speeds Up Sizing, Dedusting, Reclaiming

Put a Mighty-Mite to work and you'll minimize time and labor requirements for screening sand, candies, nuts, tumbler chips and hundreds of other materials. Safe, efficient, proven for light duty. Sizes 1½' x 4' to 2' x 8'. Send for folder, Dept. P.

Made By The Makers of SECO VIBRATING SCREENS

SCREEN EQUIPMENT CO., INC.

1752 WALDEN AVE., BUFFALO 25, NEW YORK

In Canada, United Steel Corp. Ltd., Toronto, Ont.

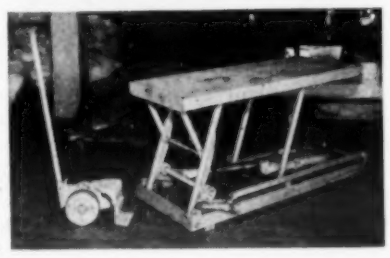
For more details circle NED-4480 on enclosed inquiry slip

PAINT HEATER
for use with hot spray process

Original 1-gallon paint can is used as heating vessel by model 202 hot spray paint heater which automatically mixes and heats 1 gallon of lacquer or enamel to uniform temperature and viscosity. An integral part of Spee-Flo heater is the Thermatrol selector which is enclosed in a vaporproof case. Timer can be set to proper weather temperature and will return to "off" position automatically, at which time paint will be at the proper temperature. Heater continues to control the paint temperature thermostatically as long as necessary. Unit is for use by finishers requiring up to 3 gallons per hour. Heating time is about 25 minutes. Spout ring, which is clamped to top of paint can, is used to pour paint into spray gun supply tank. Made by **Spee-Flo Co.**, Dept. NED, 3603 Harrisburg Blvd., Houston 3, Tex.

For more details circle NED-4481 on enclosed inquiry slip

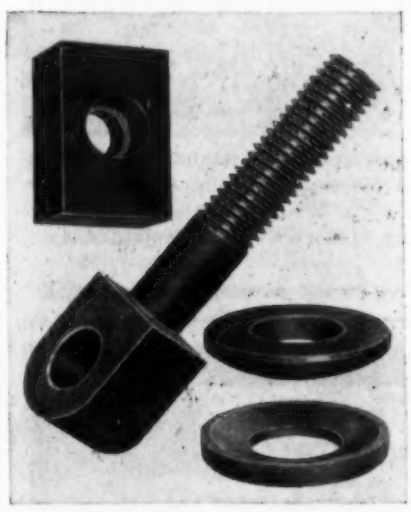
VERTICAL HYDRAULIC LIFT
lifts to 30 in. above floor



Easy adjustment of metal sheets, bars, pipes, rods and structural shapes to exact working height of metalworking machines is afforded by vertical hydraulic lift. Unit can be placed on or bolted to floor for permanent installation. Platform measuring 24 x 60 in. is only 7½ in. above floor in lowered position and 30 in. high fully raised. When mounted on wheels, lift can be used as truck to transport heavy dies or assemblies. Straight-up lifting power is obtained with foot operated hydaulic pump built into base. A power operated pump can also be furnished. Integral units of this lift are made of heavy steel channel, angle and plate stock fitted and welded for maximum strength. Variety of wheel equipment is available to fit many applications. Made by **Lange Lift Co.**, 103 W. Fowler St., Milwaukee 3, Wis.

For more details circle NED-4482 on enclosed inquiry slip

JIG & FIXTURE COMPONENTS
include latch bolts and washers



Added to line of jig and fixture components are cyanide hardened latch bolts in sizes of ⅜-16, ½-13 and ⅝-11. Also available are spherical washers in ⅜, ½, ⅝ and ¾-in. sizes. Washers are sold as matched set and are hardened. Fixture keys in ½, 9/16, ⅝, 11/16, ¾ and 13/16-in. sizes have black penetrate finish. All of these items are available from stock for immediate delivery. Made by **Northwestern Tool & Engineering Co.**, 127 Hollier Ave., Dayton 3, O.

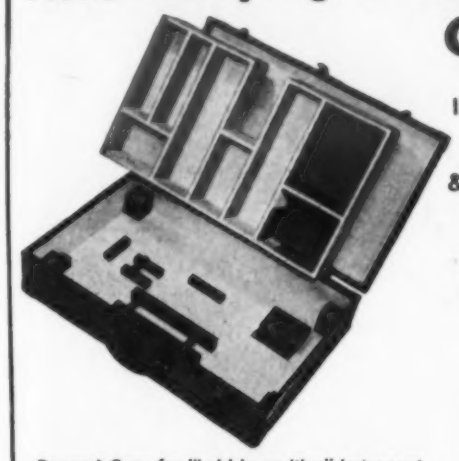
For more details circle NED-4483 on enclosed inquiry slip

FLOOR DRILL PRESS
18-in. model has ¾-in. capacity

Alloy spindle, permanently lubricated precision ball bearings, precision bored bearing seats, cast hinged belt and pulley guard, adjustable feed tension and 3½-in. column are features of this 18-in. drill press. Machine has ⅜-in. capacity in cast iron, and spindle has No. 2 Morse taper. Speed range is 450 to 1965 rpm. Other specifications are 5-in. spindle travel, base-to-spindle distance of 44½ in., table-to-spindle height of 20 in., 14 x 18-in. table and 18 x 28-in. base. Machine is also available without illustrated foot feed or with production type base. Made by **Duro Metal Products Co.**, Dept. ND-1, 2681 N. Kildare Ave., Chicago 39, Ill.

For more details circle NED-4484 on enclosed inquiry slip

HARD FIBRE **Carrying & Shipping CASES**



FOR INSTRUMENTS • ELECTRICAL & ELECTRONIC DEVICES • ARMY-NAVY EQUIPMENT • SAMPLES • PORTABLE PRODUCTS • TOOLS, etc.

Rugged Case for "held-in-position" instrument, with plain and felt compartmented tray.

BAL has specialized in durable, hard vulcanized fibre products of every kind, for more than 50 years. Reinforced edges, riveted, double-thick to resist wear. Cases designed to fit the product, balance the load, and give full protection.

Mfrs. Fibre cases, trucks, kits and mill boxes.

"SINCE 1898"

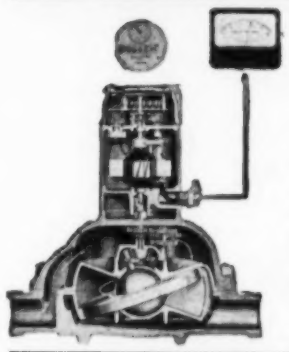
"BAL" BUILT WITH A CONSCIENCE

WILLIAM BAL CORPORATION

11 Johnson Street, Newark 5, N. J.

For more details circle NED-4485 on enclosed inquiry slip

Remote indication and control of liquid flow



Hays VERIFLOW meter accurately measures, indicates, and totals the flow of corrosive and hard-to-meter liquids without using weigh tanks, orifice plates, or gage sticks.

With the Hays VERITROL you simply set a knob at the rate of flow desired . . . then, the VERITROL *controls* the flow of liquid at that set-rate.

for corrosive liquids

Acetic Acid, Aluminum Potassium Sulphate, Ammonia, Calcium Compounds, Carbolic Acid, Formaldehyde, Fruit and Vegetable Juices, Hydrogen Peroxide, Phosphoric Acid, Potassium Hydroxide, Sodium Compounds, Sulphuric Acid (concentrated), Stearic Acid, and many others

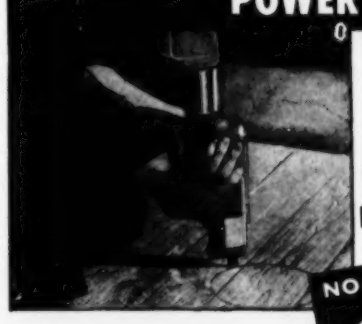
Send for a complete description of Hays Veriflow Meter and Veritrol. Bulletin 48-766

THE HAYS CORPORATION

MICHIGAN CITY 15, INDIANA

For more details circle NED-4486 on enclosed inquiry slip

NEW IMPROVED TRI-SAW ALL-PURPOSE PORTABLE POWER HACKSAW



ZIPS THROUGH WOOD, SHEET METAL, HEAVY METAL, NAILS, PIPE, Etc., IN SECONDS!

NO INCREASE IN PRICE

Only $37.50

Makes any cutting job easy, quick, economical!

Use this sensational time and work-saving tool and you'll say it is the best portable all-purpose saw on the market! Only Tri-Saw gives you all of these exceptional features:

- Fits ¼" or 5/16" h. d. drill
- Variety of blades for every cutting need
- Balanced pistol grip design
- Cuts directly into floors and walls without starting hole
- One shot lubrication
- Simple construction
- No side torque or spin

ATTENTION! JOBBERS AND DEALERS

Profitable possibilities for aggressive distributors. Write today for details.

MANUFACTURED BY

TRI-SAW CORPORATION

6611 CLAYTON ROAD • ST. LOUIS 17, MISSOURI

For more details circle NED-4487 on enclosed inquiry slip

triple your "men-power"

with this LOW COST STUEBING ENGINEERED TRUCK . . . . Triple your power—but not your payroll — with the truck your men prefer. Fleet owner studies prove it pays for itself in the first three months. Unusual ease of operation make it labor's favorite. Easy lift, automatic action, positive safety. Machine bolted frames; all parts machined and standardized. Timken bearinged steering column.

For full details on the Red Arrow (single-stroke) or the Hydromatic (multi-stroke) send for Bulletin "G".

LIFT TRUCKS, INC.
Walter Stuebing, *President*
2425 Spring Grove Ave. Cincinnati 14, Ohio

▲ For more details circle **NED-4488** on enclosed inquiry slip ▲

LUG-ALL

A large aluminum company writes: "We have 52 LUG-ALLS. We estimate we save 2 hours out of each 8 hour shift per mechanic on rigging."

ORDER TODAY

"Best hoist I ever used in 30 Years" says Indiana superintendent.

Here's the hoist that weighs less than 10 lbs. and works in ANY position!

It lifts, lowers and pulls 1½ ton loads 5 feet . . . ¾ ton loads a distance of 10 feet. The Lug-All has a flexible, preformed aircraft cable and a safety handle that prevents overload. Its double interlocking pawls lock automatically — *always!*

There's no hoist like a LUG-ALL for saving time and money on plant maintenance work!

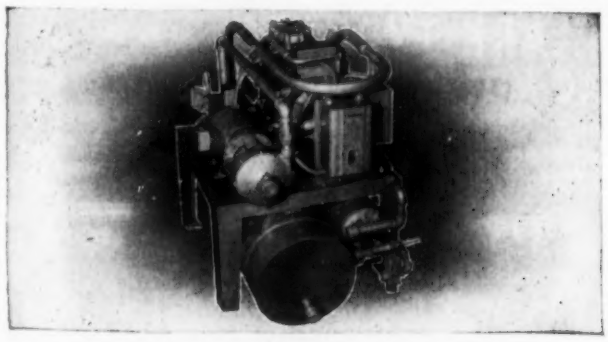
Three swivel hooks, plus built-in pulley block makes your LUG-ALL ideal for those odd assignments. Reversible handle may be removed to prevent tampering.

$35.25
FOB FACTORY

Every LUG-ALL is factory pretested to 100% over-load. One year guarantee. Order yours today.

THE LUG-ALL CO.®
Wynnewood 6, Penna.

▲ For more details circle **NED-4489** on enclosed inquiry slip ▲



INCREASE PRODUCTION with Acme FLOW-COLD*

Faster machine tool output on grinding, drilling, honing or broaching is now possible with the Flow-Cold coolant cooler. It controls your basic variable on all metal-working operations. Friction heat is completely removed from the coolant which is maintained at a constant, even temperature.

When the utmost in production is required, Flow-Cold is the perfect answer. It is a "packaged" unit, complete in every detail yet occupies little space. Its ease of installation and dependable performance has appealed to the country's largest industrial users. They report that it has helped to increase production, tool-life and speed of operation. Write to Acme Industries, Department FC today for full information.

*Trade Mark

ACME INDUSTRIES, INC.
Flow-Cold Division, JACKSON, MICH.

Continuously serving the Air Conditioning and Refrigeration Industries since 1919

▲ For more details circle **NED-4490** on enclosed inquiry slip ▲

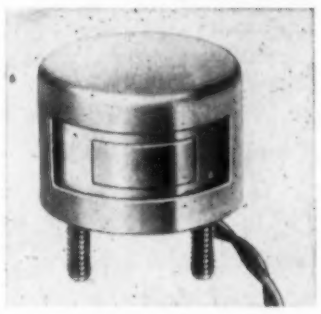
NONFERROUS CUTOFF SAW uses carbide-tipped circular blade to cut up to 2 x 4-in. aluminum stock

Aluminum shapes up to 3 x 5 in. or aluminum solids up to 2 x 4 in. can be cut by high speed carbide-tipped circular saw blade of the Comet MH automatic cutoff saw for nonferrous metals. Maximum capacity of the vise and 12-in. saw blade is 3½ x 6 in. To operate, work is placed in vise and the foot control is depressed to lock the vise, actuate the pneumatic-hydraulic feed ram and make the cut. When the cut is completed, saw retracts rapidly and automatically to starting position, the vise opens and work is released.

If operator removes his foot from the control during the cut, the saw immediately stops its forward motion and retracts with vise remaining locked until blade is clear of cut. Multiple V-belts drive the saw arbor; pulley sizes can be changed to give any mandrel speed required by saw blade in use. Feed rate of ram is infinitely adjustable from 0 to 24 ipm. Cast semisteel table has 11½ x 24-in. working surface and coolant trough. Made by **Consolidated Machinery & Supply Co.**, 2031 Santa Fe Ave., Los Angeles 21, Calif.

▲ For more details circle **NED-4491** on enclosed inquiry slip ▲

TAPE RECORDER HEAD has high fidelity and high output



Designed to provide high fidelity sound reproduction from ordinary ¼-in. magnetic coated recording tape, the TD-704 high output record-playback head utilizes a track width of 0.200-in. It has a frequency response flat within 1 decibel from 100 to 7000 cycles at a tape speed of 7.5 ips. At tape speed of 15 ips, the maximum frequency response is increased to almost 12,000 cycles. Signal output is in the order of 5 mv, and impedance is 1000 ohms at 1000 cps. Head is made so that normal tension of tape keeps it in contact with the head. Made by **Indiana Steel Products Co.**, Dept. A, Valparaiso, Ind.

▲ For more details circle **NED-4492** on enclosed inquiry slip ▲

DO YOU KNOW? You can get a free copy of the 40-page illustrated manual "Recommended Practice for the Welding of Steel Castings" which is published by the Steel Founders' Society of America. This authoritative treatise will be sent to engineers and technicians who request it on their business letterhead. Write to Tempil Corp., Dept. D, 11 W. 25th St., New York 11, N. Y.

▲ For more details circle **NED-4493** on enclosed inquiry slip ▲

▲ For more details circle **NED-4494** on enclosed inquiry slip ▲

Bolts . . . Nuts . . . Rivets . . . Screws—have provided their users with almost 100 years of the same dependable uniformity of quality and accuracy of finish that has made CLARK Products famous for their greater security and ease of application.

For Greater Security...
Fasten Fast with Clark Fasteners

CLARK BROS BOLT CO.
MILLDALE, CONN.

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BOLTS • NUTS • RIVETS • SCREWS

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FOR EASE OF OPERATION
FOR LOW COST

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EXTENSION
SCAFFOLD

EXTENDS TO ANY DESIRED HEIGHT IN A FEW MINUTES

HI-LIFT Extension Scaffold can be extended from a six-foot ladder to a 30-foot scaffold in less than 5 minutes . . . hand or electrically operated. Comes to you ready for work — no erection required, no loose parts. Built to meet individual requirements. Ideal for Painting, Lighting, Cleaning and all overhead maintenance. Pays for itself in time and labor saving.

Also Makers of
HI-LIFT PORTABLE WORK PLATFORM
and
ATLAS PORTABLE LOADING PLATFORM

Write for Full Information

ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.

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AMAZING SPRAY GUN PRESSURIZED BY CO_2!

NO HOSES • NO COMPRESSOR • NO ELECTRICAL OUTLETS • NOTHING EXTRA TO BUY!

BECKER
PRESSURE-TYPE
SPRAY GUN
USED EXTENSIVELY IN FACTORIES, HOMES, FARMS, INSTITUTIONS

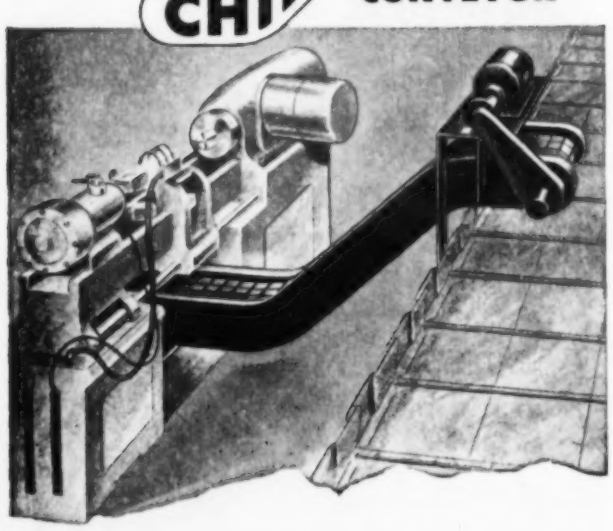
For:
- Paints
- Oils
- Varnishes
- Enamels
- Fire-Proofing
- Decorating

Handy for hundreds of industrial uses where expensive, heavy, cumbersome compressor type spraying is unnecessary. Becker Spray Gun is ruggedly built; heavy gauge (21 liquid oz.) steel container, cast aluminum head, brass and stainless inserts. Powerful CO_2 cartridges spray up to one container-full. See your Distributor or order direct, postpaid. Extra CO_2 cartridges at your dealer's or 10 for $1 postpaid.

SULLIVAN-BECKER CO., DEPT. 172-E, Kenosha, Wis.

For more details circle NED-4497 on enclosed inquiry slip

Automatic Scrap Removal... WITH A CHIP-TOTE CONVEYOR



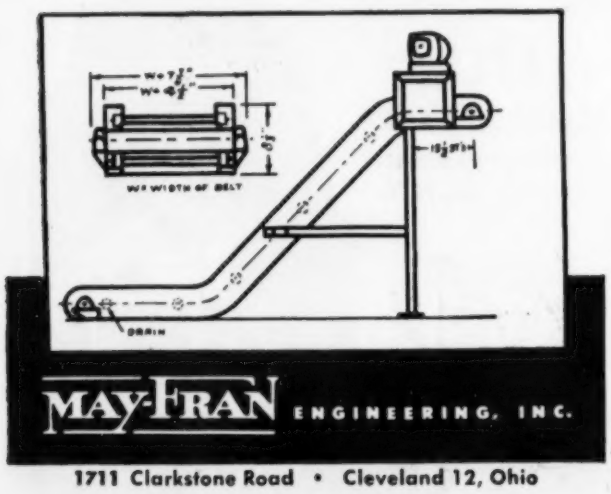
Continuous removal of chips, turnings and borings from operating automatic or multiple-spindle machines is now possible with the new MAY-FRAN CHIP-TOTE. Eliminating shut-down for manual scrap removal, it permits maximum production to be gained from equipment and manpower.

Hot, wet or dry scrap is funneled onto the CHIP-TOTE hinged-steel conveyor belt, carried horizontally until clear of the machine's working mechanism, and then transported up an incline for discharge into tote box or carry-off conveyor system.

The CHIP-TOTE can be furnished to fit practically any machine tool. Its speed of operation can be synchronized with the machine's metal removing capacity and rate of coolant flow.

Write today for further information.

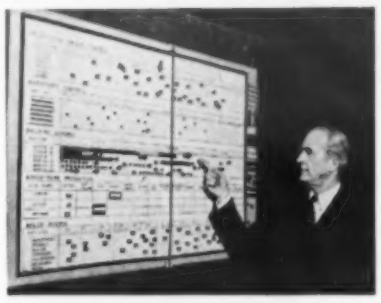
474-MF



MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Road • Cleveland 12, Ohio

For more details circle NED-4498 on enclosed inquiry slip

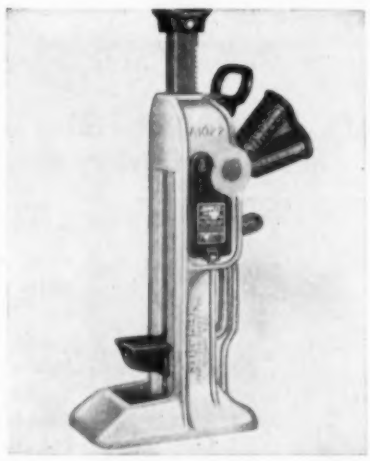
MAGNETIC VISUAL AIDS
for presentation of ideas, facts



Job of visual presentation of both ideas and facts-and-figures is made easy and effective through use of Maggie magnetic visual aids. These devices can be adapted for visual planning, production and inventory control scheduling, training and education, organization planning, map control system and any job that lends itself to visual presentation. Basic and most important items in visual aid kit include steel panels, panel assembly clips, board props, magnetic indicators, and holders, self-adhesive stickers, magnetic clips, frame sticks, pointers, disks and arrows. Panels are 18 x 24 in. and can be assembled side to side or end to end to provide any size board desired. Magnetic items are Alnico magnets and retain their magnetic powers indefinitely. Made by **Magnetic Merchandising, Inc.**, Dept. NED, 40 E. 32nd St., New York 16, N. Y.

For more details circle NED-4499 on enclosed inquiry slip

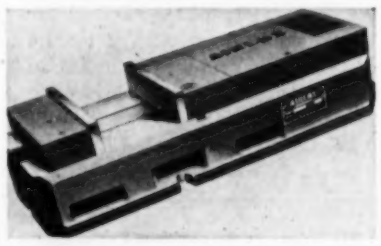
LEVER JACK
42-lb unit has 10-ton capacity



Designed for general purpose industrial, construction and railroad use, Simplex A1022 lightweight ratchet lowering lever jack has a 10-ton capacity, yet weighs only 42 lb. Made with aluminum housing, it has a minimum height of 20½ in., a 12-in. lift and a broad toe lift with a minimum height of 2 in. The toe lifts the full rated capacity. Other features include: drop forged and machined alloy steel operating parts, double lever sockets, adjustable cadmium-plated springs and links, multiple-toothed pawls, lubricated trunnion bearings and short fulcrum centers. Made by **Templeton, Kenly & Co.**, 1010 S. Central Ave., Chicago 44, Ill.

For more details circle NED-4500 on enclosed inquiry slip

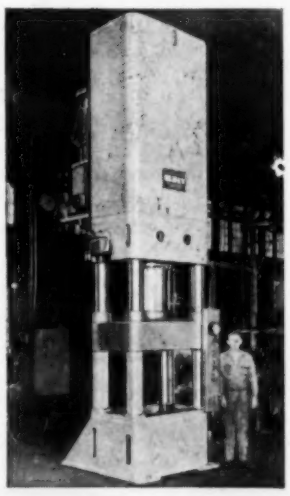
PNEUMATIC VISE
grip is 100 times air line pressure



Air-operated wedge, plus levers, gives grip on work of 100 times air line pressure in improved model S-7 Airlox pneumatic vise which also has wider vise body contour and thicker side walls than previous models. Feature in vise is the chip-plate and felt installation in which chip plate rides in vise bed slot and moves with movable jaw. Felts are recessed into movable jaw casting to act as wipers on vise bed. This keeps small chips and dirt from clogging jaw and from getting into vise mechanism. Cross keyways are now furnished in faces of jaw castings, with dowel hole in keyway center for positive alignment of false jaw faces. Vise can be actuated hydraulically when equipped with hydraulic cylinder available at additional cost. Made by **Production Devices, Inc.**, Dept. N, Whitehall, N. Y.

For more details circle NED-4501 on enclosed inquiry slip

HYDRAULIC PRESS
construction uses no pipes



All high pressure fluid in the main circuit of this Elmes hydraulic press is conducted through short, direct passages drilled in the structural parts. Pipeless construction eliminates leaking and loosened joints and reduces downtime and maintenance expense. Any type of Elmes metalworking press can be supplied with this type of construction. Made by **American Steel Foundries**, Elmes Engineering Div., 1150-C Tennessee Ave., Cincinnati 29, O.

For more details circle NED-4502 on enclosed inquiry slip

To MACHINE STAINLESS STEEL AT *Less Cost*

Ask your nearby Carpenter representative for a copy of the new "NOTEBOOK on Machining Stainless Steel." This 116-page book contains much information published for the first time in chapters on:

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- DRILLING
- TAPPING
- THREADING
- MILLING
- BROACHING
- REAMING
- FILING & SAWING
- STONING
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A *Check Chart* in each section helps you quickly spot troubles and correct them. Call your Carpenter representative for a personal copy of the NOTEBOOK. He will be glad to give copies of the NOTEBOOK to Production and Management Executives. And after you have it, if you want additional copies for the men in your plant, they can be secured at cost. Extra copies are available at 50c apiece to cover cost of printing and mailing.

THE CARPENTER STEEL COMPANY
118 W. Bern St., Reading, Pa.

For more details circle NED-4503 on enclosed inquiry slip

WHAT'S IN THIS PIPE?
YOU KNOW WHAT'S IN THIS ONE
CITY GAS

YOU CAN TELL AT A GLANCE WITH QUIK-LABEL PIPE MARKERS

Identify every pipe in your plant quickly and inexpensively with Brady Pipe Markers. They give you a uniform system of identification based on ASA Standard A13. Anyone can apply and everyone can identify the pipe contents and direction of flow. Cut maintenance time. Make your plant a safer place to work. Over 235 different markers in stock. Specials made to order.

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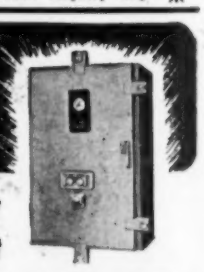
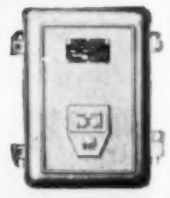
1623 E. SPRING STREET • CHIPPEWA FALLS, WIS.

For more details circle NED-4504 on enclosed inquiry slip

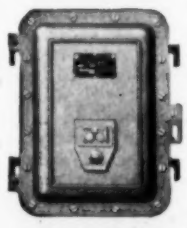
CLARK TYPE "CY" AC MOTOR STARTERS
with the new arc quenching principle



in enclosures to meet every industrial requirement



These new starters are available in enclosures approved for use in such industrial atmospheres as hazardous gas, dust or excessive humidity.



Illustrations show—left above, Type IV; watertight; left below, Type VII, for hazardous gas locations; right above, Type V, dust-tight; right middle, Type IX, for hazardous dust locations; right below, Combination Starter in Type IX explosive resisting enclosure.

CLARK Type "CY" starters with low maintenance assure more continuous production.

THE CLARK CONTROLLER CO.
EVERYTHING UNDER CONTROL • 1146 EAST 152nd STREET, CLEVELAND 10, OHIO

For more details circle NED-4505 on enclosed inquiry slip

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You'll get lots of HELP from the Latest Edition of DICO's Wheel Catalog.

It is loaded with uniquely simplified answers to high speed and low speed wheel engineering problems.

A modern line of industrial wheels 6"—22" rubber diameter.

DICO COMPANY Write TODAY! 206 S.W. 16th ST., DES MOINES, IOWA

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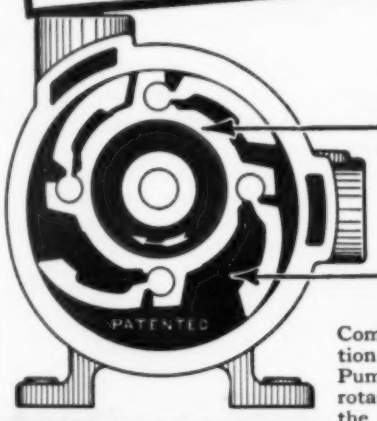
LEIMAN AIR PUMPS GIVE YOU Greater Capacity!



SMALLER PISTONS provide LARGER AIR SPACE

HINGED WINGS take up their own wear

Compare this cross-section of a Leiman Air Pump with any other rotary air pump. It is the working air space that counts—and Leiman provides 2 to 3 times more area, per size and weight of pump.

Handle air pressure, vacuum or suction jobs with much smaller Leiman Rotary Air Pumps. You save weight and space—run at lower r.p.m.—have fewer moving parts—no springs, gaskets or packings—no tips to renew—nothing to give trouble. Leiman patented leak-proof hinged wings maintain fully-rated pressure or vacuum for years and years.

What is your air application?

Send us details. Leiman engineers offer over 60 years' experience with thousands of air applications.

Catalog and Application Data sent on request. For Pumps—write DEPT. A

LEIMAN Rotary AIR PUMPS (Pressure—Vacuum)

Metal Cleaning and Finishing without acids or scratch brushes

Fast, low-cost, safe, uniform!

LEIMAN SANDBLASTS

Clean up scaly, rusty, rough surfaces—prepare better surface for plating, enameling or painting—stencil letters and designs—more rapid matte or satin finishes. Use unskilled help. Many models, treadle or automatic.

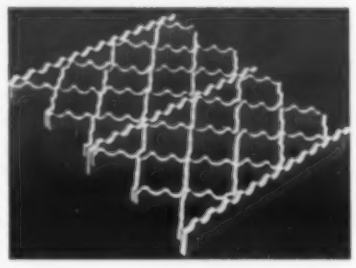
For Sandblasts—write DEPT. B

LEIMAN BROS., Inc. 167 Christie Street, Newark 5, N. J.

AIR PUMPS • AIR MOTORS • SAND BLASTS • DUST COLLECTORS

▲ For more details circle NED-4507 on enclosed inquiry slip ▲

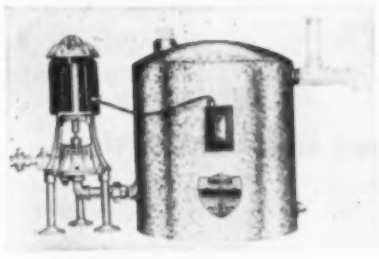
SLIPPROOF GRATING minimizes walking hazards



Particularly suited for installations where excessive oil, grease, water or icy conditions make walking hazardous and where drainage and sanitation are necessary is ⅛-in. stock Firm-Grip grating. Serrated edges give sure footing, but are still comfortable to walk on. Tests show grating to be slipproof even after being submerged in chassis grease and tilted to 15 degree angle. Fabricated by **Bustin Firm-Grip Grating Corp.**, 111 E. 130th St., New York 37, N. Y.

▲ For more details circle NED-4508 on enclosed inquiry slip ▲

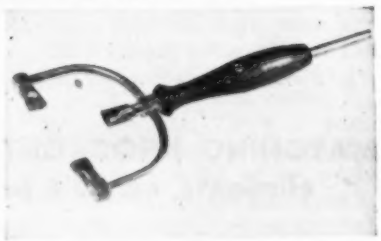
CONDENSATION RETURN UNIT has 2 to 33 gpm pumping capacity



A variety of applications in industrial plants or factories requiring circulating hot water, air conditioning service or boiler feed can be served with Advance Heatsaver condensation return unit. Assembly consists of vertical high-pressure centrifugal pump with ¼-hp single phase motor and 20-gal galvanized tank with float switch. Easy to install and quiet in operation, 25 x 35 x 23-in. unit has pumping capacity from 2 to 33 gpm, at discharge pressures ranging from 4 to 60 psi, depending upon type of installation required. Larger models with discharge pressures up to 125 psi are also available. Made by **Advance Pump Co.**, Dept. DW, 2531 Ninth St., Berkeley 10, Calif.

▲ For more details circle NED-4509 on enclosed inquiry slip ▲

THREE-NOZZLE HAND TORCH for glass blowing operations



The U-shaped fork of this glass blower's hand torch carries three interchangeable grid-type fish tail burners, placed 90 degrees apart so that the flames converge at the midpoint. Torch is used for removing and sealing off glass tubes in a vacuum system, but has other applications such as in the manufacture of various types of gas-filled tubes. When the burner is applied to an evacuated glass tube, the flames quickly soften a narrow circular band, causing the tube to collapse at that point and seal itself off. Models are available for natural, manufactured or bottled gas. Tips are replaceable and can be furnished for use with gas and oxygen. Made by **Research Vacuum Supply Co.**, 3436 W. Montrose Ave., Chicago 18, Ill.

▲ For more details circle NED-4510 on enclosed inquiry slip ▲

25 YEARS OF LEADERSHIP IN FASTENINGS OF STAINLESS STEEL

To YOU, Anti-Corrosive's 25th Anniversary is an assurance that the oldest, largest and best known firm dealing exclusively in stainless steel fastenings is best suited to serve your needs in this field.

Still Plenty of Fastenings IN STOCK

For quick delivery of stainless steel fastenings, check Anti-Corrosive first, since there are many stock items and alternates on hand!

FREE-A-N Fastening Selector!

Write for Slide Chart No. 52U — instantly identifies A-N Nos. pertaining to stainless fastenings, gives sizes, other data. Catalog available.

Anti-Corrosive Metal Products Co., Inc. 1927 – 1952

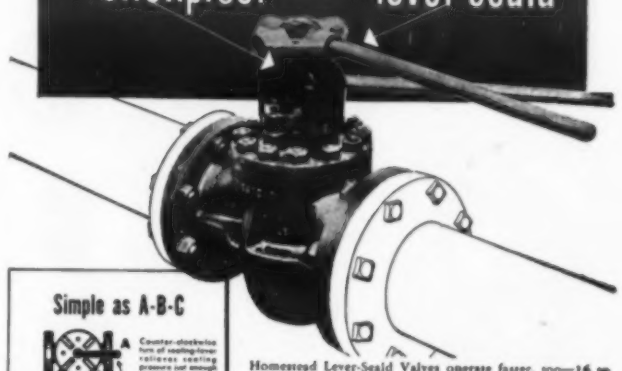
Manufacturers of STAINLESS STEEL FASTENINGS

CASTLETON ON HUDSON, NEW YORK

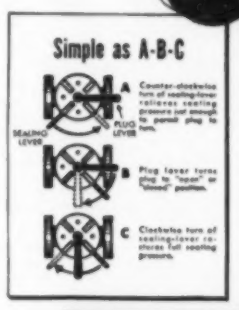
▲ For more details circle NED-4511 on enclosed inquiry slip ▲

• at all times • under all conditions • throughout its long lifetime of service

This Homestead Valve will always work it's stickproof because it's lever-seald



Simple as A-B-C



Homestead Lever-Seald Valves operate faster, too—16 to 28 times faster than screw-stem type valves. They require no lubrication . . . provide unobstructed, straight-line fluid flow with minimum pressure drop . . . afford maximum protection to sealing surfaces against corrosive and erosive line fluids. And because only a quarter-turn is needed for full opening or closing, they are ideal for installation in restricted areas where operation of other types of valves might be difficult.

Next time you have damaged or sticking valves, replace them with Homestead Lever-Seald Plug Valves. Once you use them you'll never be satisfied with ordinary valves.

For complete information write for Valve Reference Book No. 39-S.

HOMESTEAD LEVER-SEALD PLUG VALVES.

HOMESTEAD VALVE MANUFACTURING COMPANY

P. O. BOX 84 CORAOPOLIS, PA.

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Everything this ball bearing has you can get in FAFNIR Ball Bearings this small

• For extremely small shafts in instruments, home appliances, cameras and projectors, fractional h.p. motors, Fafnir makes several series of extra small ball bearings . . . in metric bore sizes down to 4 mm and in inch sizes down to ⅛". Available with standard, special or super-precision tolerances. Three constructions . . . filling slot, non-filling or spring type retainers. Can be fitted with grease shields, felt seals, Mechani-Seals or Plya-Seals. If you want top performance on a small shaft — Fafnir has the answer. Write for new Instrument Bearing Catalog. The Fafnir Bearing Company, New Britain, Conn.

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MOST COMPLETE LINE IN AMERICA

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The experience of countless users and motor re-builders prove conclusively that Klixon Protectors extend the operating life of motors by preventing motor burnouts.

Here's how — should the motor become dangerously overheated, the Klixon Protector snaps the power "off" before the motor windings can burn out. When it cools sufficiently, the protector snaps the power "on" again automatically if the automatic reset type is used . . . or by pushing the red button when the manual reset type is used.

In addition, you help save critical copper thus extending the copper allotment for the manufacture of additional new motors, instead of using it for rewinding of burned-out motors.

Remember, you too, can keep equipment operating, cut maintenance costs by using motors with built-in Klixon Protectors.

SPENCER THERMOSTAT
Division of Metals & Controls Corp.
1905 Forest St., Attleboro, Mass.
KLIXON

▲ For more details circle NED-4515 on enclosed inquiry slip ▲

wherever two or more parts are *fastened together...*

SOUTHCO FASTENERS

improve performance lower production costs

You can lower manufacturing costs . . . expedite DO contracts . . . simplify and speed assembly operations with Southco Fasteners.

There are many types to choose from—each highly developed to lower production costs and improve fastener performance. If a special fastener is required, Southco engineers can assist you with the design.

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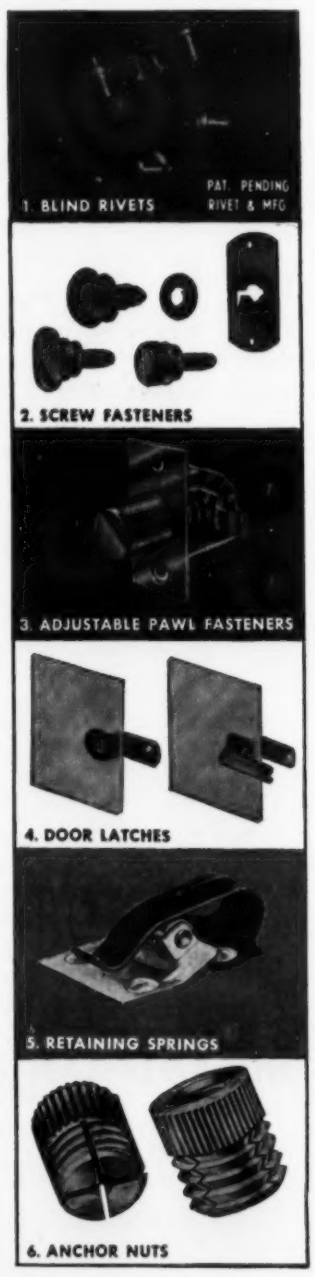
Inquiries invited. Write Southco Div., South Chester Corp., 1413 Finance Bldg., Philadelphia 2, Pa.



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Important for military contractors! Prompt delivery now possible.

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AIR PRESSURE REGULATOR for exact control in 0-30 psi range

Precise control of air or gas pressures in the range from 0 to 30 psi at 0 to 2 cfm is afforded by precision pressure regulator. Unit is especially suited for use with air-controlled instruments, but is also applicable to any process requiring air, nitrogen or other inert gases whose pressure must be exactly controlled. It operates on primary line pressures up to 400 psi with delivery pressures ranging from 0 to 30 psi. Regulator has built-in relieving feature which prevents build-up of excessive pressures. Made by **C. A. Norgren Co.**, 3405 S. Elati, Englewood, Colo.

▲ For more details circle NED-4517 on enclosed inquiry slip ▲

DRILL PRESSES with drive belt alignment devices

Perfect drive belt alignment is assured at all times and belt tension can be released for quick speed changing without tools by device incorporated in 1650 series drill presses. Besides two-way drive aligner-belt tensioner, machines feature involute design six-tooth splined drive, guard which covers pulley spindle running on four greased-sealed ball bearings, quick-acting nonmarring quill and column locks. Speeds are available in two ranges: 500, 925, 1750, 3250 and 5500 rpm; and 425, 775, 1330, 2200 and 3340 rpm. Made by **Boice-Crane Co.**, 951 Central Ave., Toledo 6, O.

▲ For more details circle NED-4518 on enclosed inquiry slip ▲

MATCHING KNOCKOUTS eliminate conduit bending

Electrical conduit bending when ganging electrical devices is eliminated with use of matching tangent knockouts which provide ½ to ¾-in. concentric knockouts with the larger ones in a tangent pattern (illustrated). Conventional concentric arrangement provide knockouts of various sizes grouped around common center which must be positioned far enough from rear of enclosure to allow installation of largest conduit size. In the tangent pattern, common center of two smaller knockouts is constant distance from rear of enclosure. This automatically positions tangent pattern, insuring matching knockouts regardless of size of cluster or device rating, and bending or off-setting of conduit is eliminated. Developed by **Square D Co.**, 6060 Rivard St., Detroit 11, Mich.

▲ For more details circle NED-4519 on enclosed inquiry slip ▲

LOW PRESSURE INDICATOR measures and records on chart

Designed to measure and chart records as low as 0 to 10 in. head of water pressure, type 3-B Minicorder is a compact instrument. Recorders have ranges as high as 0 to 60 psig. Overall dimensions of 2-lb unit are 5¼ x 5¼ x 2¼ in. Calibration adjustment permits range adjustment at any point on the chart for exact setting. Measuring elements are enclosed in metal case which is gasketed for protection from dust, moisture and weather. Operating unit is assembled to heavy lacquered dial. All parts are interchangeable. Instrument is fitted with a ¼-in. male bottom connection and easily replaces most dial gages. Measuring elements consist of a series of brass or steel bellows suitable for liquids and gases. Wide variety of measurement units are available. Made by **Dickson Co.**, 7418 Woodlawn Ave., Chicago 19, Ill.

▲ For more details circle NED-4520 on enclosed inquiry slip ▲

SPEED HAND-LABELING ON HARD-TO-LABEL JOBS with

Mystik *Self-Stik* LABELS

SPEED PRODUCTION—No moistening. Stick instantly.

EASY APPLICATION on hard-to-reach, hard-to-label surfaces.

FLEXIBLE and stretchable for curved or uneven surfaces.

PERMANENT—Resistant to stain, moisture, scuffing, delamination. Removable, if desired, without staining.

BEAUTIFUL—Finest color printing; die-cut; embossed; varnished or acetate laminated.

The outstanding qualities of MYSTIK LABELS are due to rubber-saturated stock and the strongly bonded rubber adhesive, providing strength, flexibility, toughness, strong adhesion and ease of handling. Write for full information and samples.

CHICAGO SHOW PRINTING COMPANY
CHICAGO • NEW YORK

2657 NORTH KILDARE • CHICAGO 39

▲ For more details circle NED-4521 on enclosed inquiry slip ▲

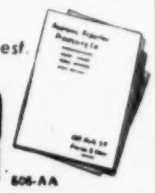
FOAM-FABRIC COMBINATIONS

Thin gauge foamed latex integrated with fabrics!

Cushioning action of foam plus tensile strength of cloth . . . ANDAL combinations provide both. The exclusive **ANDAL** process actually embeds fabrics in latex foam prior to its vulcanization. The result is a positive union which withstands laundering and even boiling in soap or detergent. Because the porosity of both materials is retained, foam-fabric combinations have a natural "breathing" action.

ANDAL materials can be cut, sewed, tacked, stapled or cemented. Available in widths from 45 to 66 inches and in foam thicknesses from 1/16 to ¼-inch. Colors and foam densities to specifications.

Samples available on letterhead request.



ANDREWS-ALDERFER COMPANY, INC. • 1102 HOME AVE., AKRON 10, OHIO

606-AA

▲ For more details circle NED-4522 on enclosed inquiry slip ▲

THIS IS ONE PLACE IN YOUR PLANT FOR PRIME-MOVER

This Prime-Mover is hauling away scrap from production machines. Carries 1500 lb. load under power, forward and reverse.

Scrap Profit Quickly Pays for a Prime-Mover!

Wherever there are filings, cuttings and other scrap to be carried away, Prime-Mover helps maintain a regular "plant clean-up schedule". Good House Keeping pays dividends. Prime-Mover gets the job done speedily, with a saving in manpower as a bonus. Write for helpful data.

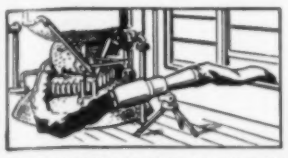
THE PRIME-MOVER COMPANY
MUSCATINE, IOWA

THE Bell PRIME-MOVER

▲ For more details circle NED-4523 on enclosed inquiry slip ▲

Ventilate CONFINED Places with Vano Design "C" Ventilator-Exhauster

WELDING FUMES are here removed by this Vano Ventilator-Exhauster.



FUMES FROM A REACTOR KETTLE are here withdrawn by tripod-mounted Vano Ventilator-Exhauster. Note non-collapsible suction tubing and discharge tubing.

Ideal for withdrawing welding fumes from confined places or directly from the welding rod. Provides greater safety, greater comfort for workers . . . leads to greater work efficiency. Can be furnished with 8" suction inlet to which 8" non-collapsible suction tubing may be attached . . . or provided with multiple inlet nozzles for 5", 4" and 3" suction hose.

Other types are also available for supplying fresh air to men working in confined places, such as tanks, manholes, drums, boilers and ship-holds.

For full details on Coppus Vano Design "C" Ventilator-Exhauster write **COPPUS ENGINEERING CORPORATION,** 405 Park Avenue, Worcester 2, Mass.

ANOTHER **COPPUS** "BLUE RIBBON" PRODUCT

▲ For more details circle **NED-4524** on enclosed inquiry slip ▲

INGENUITY
can solve any problem

if YOUR PROBLEM
involves the higher production of threaded parts

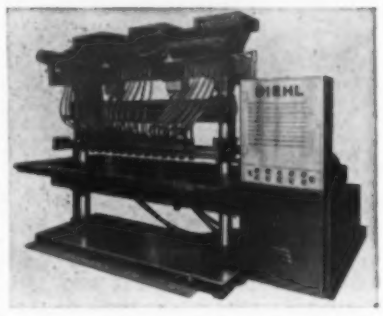
HY-PRO TAPS
can help you to a solution

HY-PRO TOOL CO.
NEW BEDFORD, MASS. U. S. A.
Subsidiary of Continental Screw Co.

. . Order from your distributor or call the HY-PRO SALES ENGINEER

▲ For more details circle **NED-4525** on enclosed inquiry slip ▲

NAILING MACHINE
features pushbutton operation for making boxes, crates, skids, etc.



Controlled by electronics and powered by hydraulics, the Hydronic nailer uses pushbutton operation in the making of packing crates, boxes, skids, reels, pallets and other wooden devices. By moving preselected switches on an electronic master control panel, operator trips high speed solenoids for split-second picking of nails from feeders to nail chucks. On the 72-in. model, up to 24 nails and 10 patterns can be used in any combination. Pushbuttons also control raising and lowering of the work table.

After selecting specific nails and patterns, the touch of a pedal lowers hydraulic units for driving nails at up to 60 strokes per minute. Diagonal thrust clinching action synchronizes a sideward movement with an upward movement, assuring a true bending of the nail which sinks it firmly into the wood, flush with the surface. This action can be disconnected. Solenoid selectors operate with equal efficiency on any size, type or gage nail from 2 to 16 penny. Only nail chucks need be changed to accommodate different sized nails. Machines will be available in open and closed back designs in 40, 48, 60 and 72 in. (illustrated) sizes. Made by **G. M. Diehl Machine Works, Inc.,** 1128 Collins Ave., Wabash, Ind.

▲ For more details circle **NED-4526** on enclosed inquiry slip ▲

GOGGLE LENS TISSUE & DISPENSER
silicone treated for fast cleaning

Designed for keeping safety goggles clean and polished, 5 x 6¾-in. lens tissue readily removes smears, dirt, lint and dust. Tissue leaves invisible coating of silicone on lenses which protects them and makes subsequent cleanings easier, faster and longer lasting. They are packed 800 sheets to a package and six packages to a carton. Metal dispenser is also available. Made by **General Scientific Equipment Co.,** 2701 W. Huntingdon St., Philadelphia 32, Pa.

▲ For more details circle **NED-4527** on enclosed inquiry slip ▲

DO YOU KNOW? A "flying typewriter" that prints data at the rate of 24,000 characters a minute has been developed for use in computing, data-handling, communications and research fields. A total of 47 characters comprising the alphabet, numerals and special symbols are employed. This electronic device is made by Potter Instrument Co., 135 Cutter Mill Rd., Great Neck, N. Y.

▲ For more details circle **NED-4528** on enclosed inquiry slip ▲

SHENANGO *Centrifugal* CASTINGS ... KEY TO SAVINGS

YOU'LL DO BETTER WITH SHENANGO CENTRIFUGALLY CAST PARTS

HERE'S WHY . . . Shenango centrifugally cast parts offer many inherent advantages that can help you avoid trouble and save time and money.

For example, due to the centrifugal casting action, you get a more uniform, pressure-dense metal, free from sand inclusions, blow holes and other often-hidden defects. You get higher strength, greater wear resistance, better elongation—longer lasting parts, better able to withstand severe service of *any* kind.

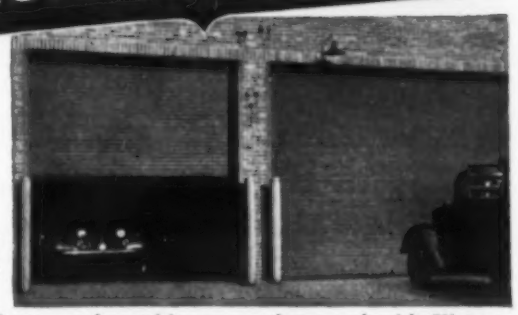
So if your plans call for symmetrical shapes, anywhere from tiny bushings to huge rolls, ferrous or nonferrous, rough or finished, check with Shenango. Company after company finds it a good way to do a better job at lower cost.

SHENANGO-PENN MOLD COMPANY
Centrifugal Castings Division
Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO
ALL RED BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL

▲ For more details circle **NED-4529** on enclosed inquiry slip ▲

Fit the closure to the opening with KINNEAR Rolling Doors



ANY SIZE FOR ANY BUILDING

You can be sure of matching every door need with Kinnear Rolling Doors. These interlocking steel-slat doors of coiling upward action are built to any specified opening size. Write.

The KINNEAR Manufacturing Company
Factories: 3017 Fields Ave., Columbus 16, Ohio
1742 Yosemite Ave., San Francisco 24, California
Offices and Agents in Principal Cities

Saving Ways in Doorways
KINNEAR ROLLING DOORS

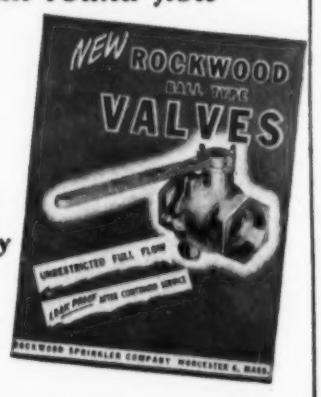
▲ For more details circle **NED-4530** on enclosed inquiry slip ▲

Leakproof, full round flow

BALL VALVE

resists wear longer opens, closes quickly with quarter turn

GET THIS FREE BOOKLET FOR FACTS!



Ideal for handling water, air, carbon dioxide, nitrogen and other gases, paraffin and asphalt base petroleums, alcohol, paper fluids and many other types of liquids and gases.

Full, round, pipe-sized open area of Rockwood ball valves prevents shape of stream from altering . . . allows piping to handle fluids with minimum friction loss. Each valve constructed with chrome-plated, floating bronze ball that is extremely resistant to scratching, pitting, abrasion. Valve does not depend on mechanical parts to maintain proper alignment of ball and seat. Opens and closes with a quarter turn. Approved by Underwriters' Laboratories, Inc. For complete details, write us direct. Distributors in all principal cities.

ROCKWOOD BALL VALVES
ROCKWOOD SPRINKLER COMPANY
44 HARLOW STREET, WORCESTER 5, MASS.

▲ For more details circle **NED-4531** on enclosed inquiry slip ▲

REDUCES ACCIDENT HAZARD IN PRINTING PLANT!

More Proof that **PABCO MASTIPAVE** is the floor covering for YOU!

Listen to Harold Baxter, Vice-President of A. Carlisle & Co., one of San Francisco's largest printing concerns:

"Mastipave is so satisfactory we are planning to install it in other work areas. Our employees stand most of the time—really appreciate this floor covering. It's comfortable underfoot—has actually reduced the accident hazard from slips and falls. Employee efficiency is so important we couldn't do without Mastipave today. Under rough treatment, including light trucking, Mastipave has stood up well—low in cost—easy to maintain."

PABCO MASTIPAVE *in roll goods and tiles*

GRIP-TREAD *in roll goods only*

. . . Proved, for over 28 years—in schools, industries, hospitals, public buildings.
. . . Costs little, looks good, wears long.
. . . Worth investigating, for YOUR toughest job!

SEND NOW FOR THE FULL STORY OF MASTIPAVE

PABCO PRODUCTS INC.
New York 16 • Chicago 54 • San Francisco 19
(Mail to Dept. L, nearest office)

GENTLEMEN: Without cost or obligation to me, please send folder, "Every Building Needs Pabco Mastipave."

NAME _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle **NED-4532** on enclosed inquiry slip ▲

TORIT

DUST COLLECTOR

Poke him off balance with your left, then let him have it with your right. That's good boxing and, in the setup pictured here, good dust collecting.

On this commutator grinder a problem of turbulence and heavy dusts was solved with a Torit No. 84 Dust Collector and dual hooding. Here the lower hood sort of pokes the dust off balance so it's a sucker for the one on top . . . and dust no longer prevents accurate turning of the commutator.

Torit has been solving dust problems like this for forty years. Our experience and know how are at your command . . . so bring *your* dust problems to—

Torit Door Fastener

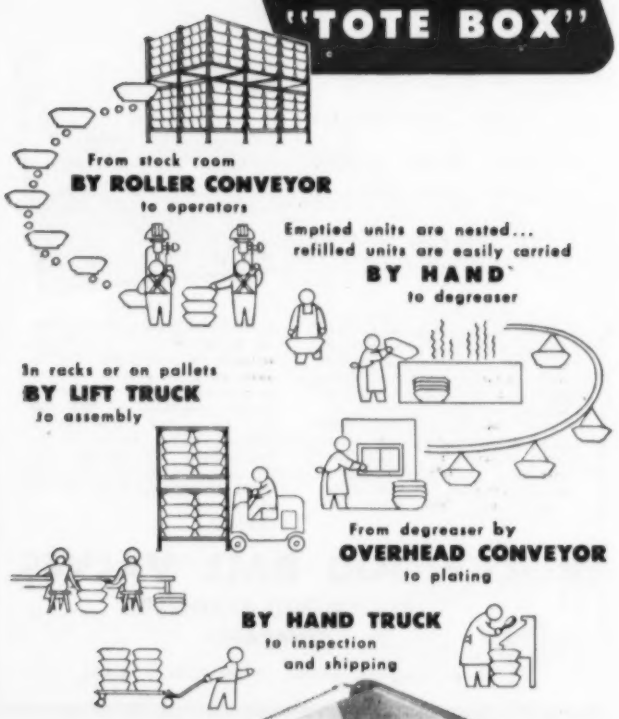
The sturdy and efficient door fastener used on Torit cabinets is available for use on your own products. Strike plate either flat or angular. Write for quantity prices.

TORIT MANUFACTURING CO.
298 Walnut Street St. Paul 2, Minn.

P.S. Also ask for the latest Torit catalog showing the complete Torit line of dust collecting equipment.

For more details circle NED-4533 on enclosed inquiry slip

AT LAST-
Scientific Design applied to the "TOTE BOX"



More than just a new materials handling box—the NesTier is a new system—a new technique—that speeds up the flow of work on any production line. It offers four definite advantages over all older methods of handling small parts: (1) saving of space; (2) greatest ease of handling in the stock room, on the assembly line and in transportation throughout the plant; (3) adaptability to conveyor systems; (4) visibility and easy accessibility of parts.

NesTier materials handling boxes nest when empty—tier when filled. Tiered, parts in all boxes are visible and accessible. NesTiers are ruggedly constructed of heavy gauge steel and are available in two standard sizes: No. 220—16 ga., 22⅝" long, weight 15 lbs.; No. 175—18 ga., 18¼" long, weight 6 lbs.

Write for full details on NesTiers, racks, trucks, monorail carriers and dollies.

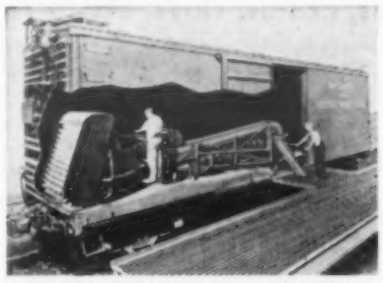
Our service includes complete engineering advice on systematizing the handling of small parts in your plant. Your inquiries are invited.

THE CHAS. WM. DOEPKE MFG. CO., Inc.
Rossmoyne, Ohio

NESTIER Metal Specialties Division

For more details circle NED-4534 on enclosed inquiry slip

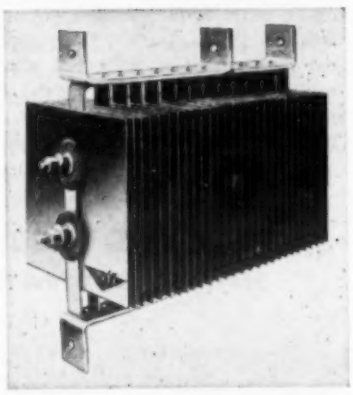
FREIGHT CAR UNLOADER conveys bulk materials from car



Such bulk materials as starch, chemicals, sugar, lime and cement can be unloaded from railroad box cars by the V-7 car unloader with savings in time and manpower. Unit is installed between tracks for unloading one car while another is being spotted and opened. Machine is handled by two men. Gutter brushes, which can be swung out to the wall of the car, bring the material being unloaded to the buckets at the center, leaving little to be swept out. One plant is unloading six cars of corn per hour with the machine. It is operated by hydraulic pressure, with conveyors, buckets and trucks being driven by motors. Made by **Manierre Engineering & Machinery Co.**, Dept. N, Colby-Abbot Bldg., Milwaukee 2, Wis.

For more details circle NED-4535 on enclosed inquiry slip

POWER RECTIFIERS for military and commercial uses



Selenium type Powersel power rectifiers are rated at higher wattage per unit of volume then is usual for their type. Rating is made possible by manufacturing process which produces rectifier plates of extremely high reverse resistance and extremely low forward resistance. Aluminum base plates on which they are made, and hardware with which they are used, make for minimum weight to go with minimum size of rectifiers. Units can be supplied in infinite variety of electrical configurations and ratings and can be coated with special protective finishes or hermetically sealed to meet extreme operating conditions. Made by **Electronic Devices, Inc.**, Dept. NED, 429 Twelfth St., Brooklyn 15, N. Y.

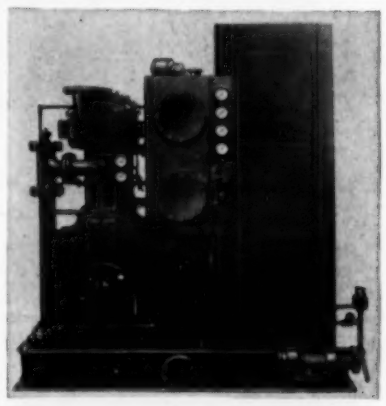
For more details circle NED-4536 on enclosed inquiry slip

ADJUSTABLE TROLLEY HOIST offered in three capacities

Adjustable for various I-beam sizes without dismantling, Peerless Packet trolley hoists are made in ½, 1 and 2-ton capacities. Hardened high carbon steel trolley wheels have large diameter double-row ball bearings, lubricated through the stud by pressure grease gun. Other features include gears and shafts mounted on lubricated-for-life shielded ball bearings for easy hand chain pull; precision cut gears of heat treated alloy steel; and heat treated high carbon steel load chain. Made by **Harrington Co.**, 1650 Callowhill St., Philadelphia 30, Pa.

For more details circle NED-4537 on enclosed inquiry slip

OXYGEN GENERATORS outputs from 0.5 to 12 tons daily



Industrial users of oxygen in steel, glass, metal fabrication, chemical, process and other industries will be able to produce their own high purity oxygen at considerable savings in cost with this semiportable generator. Compact units have a minimum of moving parts and consume nothing except air and power. Models will be available with capacities from 0.5 to 12 tons daily. Oxygen produced is 99.5 per cent pure. Generator has series of automatic reversing heat exchangers which eliminate the expense of chemical purification of air and contribute to high efficiency. Made by **Joy Mfg. Co.**, Dept. 39, Henry W. Oliver Bldg., Pittsburgh 22, Pa.

For more details circle NED-4538 on enclosed inquiry slip

"NO MORE SOLDER REJECTS"
Says J. H. WINN SONS
Manufacturers of Radio Dial Pointers

PRECISION WELDING WITH RAYTHEON WELDPOWER* UNITS
Cuts Rejects, Eliminates Expensive Solder

"Soldering and other assembly defects sometimes spoiled up to 80% of our production," says J. H. Winn Sons, Winchester, Mass. *"Changing to precision welding with Raytheon Weldpower* Units cut out completely all soldering rejects and at the same time eliminated the need for scarce and costly solder."*

Ask us to show *you* how Raytheon Condenser Weldpower can improve production of small parts involving assembly of non-ferrous or dissimilar metals. Send sample parts and details . . . or write for complete information.

*Reg. U. S. Pat. Off. Address Dept. NE-5

Raytheon Condenser Weldpower Control Units are available in three sizes and with appropriate Weldpower Heads.

RAYTHEON — Excellence in Electronics
RAYTHEON MANUFACTURING COMPANY
Equipment Sales Division, Waltham 54, Mass.
DISTRICT OFFICES: Boston • New York • Cleveland
Chicago • New Orleans • Los Angeles • San Francisco • Seattle

For more details circle NED-4539 on enclosed inquiry slip

"HUSKY"

The Cushman "Husky" proved over half a century, is clearly a leader. Four-cycle, single-cylinder, L-head Cushman engines, available in three models developing from 1.5 to 6.0 HP are adaptable to hundreds of operations — particularly original equipment installations requiring high-output, long-life performance. All models deliver full horsepower hour after hour with maximum economy and minimum service and attention.

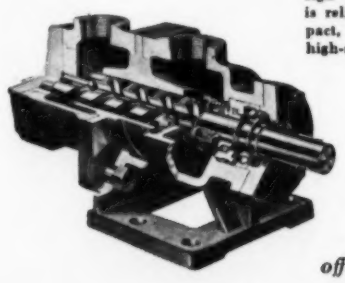
Serviced internationally by Cushman Motor Scooter Dealers. Investigate today by writing for free details and information.

OVER 50 YEARS OF LEADERSHIP

CUSHMAN MOTOR WORKS, INC.
966 No. 21st St. Lincoln, Nebr.

For more details circle NED-4540 on enclosed inquiry slip

Newest IMO pump – Greatest Savings



Note simplicity of unique IMO design—only three moving parts. IMO is reliable, quiet, pulsation-free, compact, excellent for direct-connected high-speed operation.

DE LAVAL
offers immediate delivery of new IMO pump
Write today

This newest De Laval IMO pump—Model A313B—can be used profitably on a wide variety of hydraulic applications for higher pressures. Quantity-produced to help trim your costs, the new IMO saves you up to 40% in initial cost over other IMO models for pressures up to 275 psi. In addition, this quality-designed rotary positive displacement pump gives you all the low-maintenance advantages of the famous IMO pumping principle.

Put the new De Laval IMO A313B pump to work handling light or viscous fluids in hydraulic systems, rotary and steam atomizing oil burners, lubrication, governing systems and similar services. Specify it for capacities to 80 gpm, pressures to 275 psi, intermittent pressures to 325 psi.

DE LAVAL *IMO Pumps*

DE LAVAL STEAM TURBINE COMPANY
Trenton 2, New Jersey DL 147A

For more details circle NED-4541 on enclosed inquiry slip

CUT OFF TO ACCURATE LENGTH AND

Stop Scrap!

The MOTCH & MERRYWEATHER is the Way to That End

Triple-Chip Saw Blade

Segmental blade illustrated.

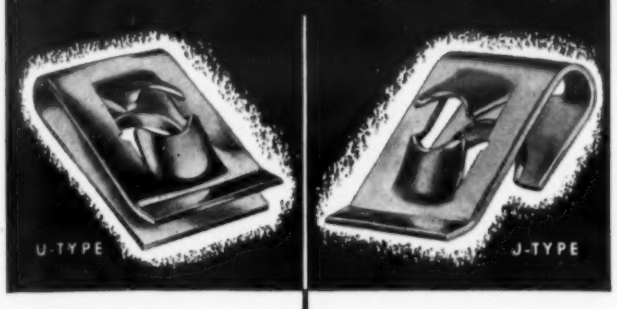
Don't be guilty of wasting metal. Cut off all shapes and sizes of ferrous and non-ferrous metals to accurate lengths. Segmental blades for large stock; solid blades for smaller. Let your local M. & M. dealer show the way to less waste.

Get bulletins from us or your local dealer.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING • CLEVELAND 13, OHIO
COMMAND OUR UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

For more details circle NED-4542 on enclosed inquiry slip

Speed Nuts ...proved cost-savers on assembly lines throughout industry



"U" and "J" Type SPEED NUTS are self-retaining; hold a constant hole alignment, and will not vibrate loose. They are made of highest quality spring steel in a wide variety of standard and special sizes. "U" and "J" Types are only two of thousands developed by Tinnerman Engineers to cut fastening costs. Ask your Tinnerman Representative, or write us direct for a FREE "Fastening Analysis."

TINNERMAN PRODUCTS, INC.
Dept. 12, Box 6688, Cleveland 1, Ohio

For more details circle NED-4543 on enclosed inquiry slip

with a MILWAUKEE BRIQUETTING PRESS

Conserve critical metals . . . decrease scrap handling costs . . . save storage space with the MILWAUKEE Briquetting Press. It automatically converts low-grade bulk metal turnings, borings, chips and shavings into dense cylindrical briquettes which are suitable for direct charging into furnace or foundry cupola as high-grade scrap. In many plants, savings pay for press in less than one year.

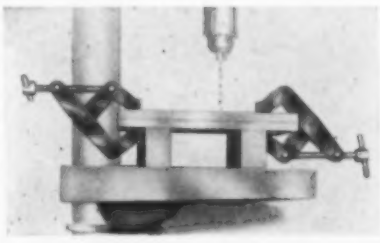
Write today for Bulletin No. 117 for complete details.

385-SI

SPO MILWAUKEE Foundry Equipment Division
6475 Grand Division Ave. • Cleveland 25, Ohio

For more details circle NED-4544 on enclosed inquiry slip

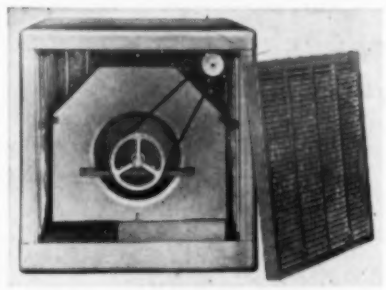
WORK-HOLDING CLAMP eliminates distortion and twisting



Combining the strength and features of drop-forged C-clamp and toolmaker's parallel clamp, Saxton case hardened work-holding clamp makes use of a torque - converting ball bearing trunnion to eliminate distorting and twisting action. Trunnion also absorbs vibration. Screw is in a horizontal position at all openings. Lightweight clamp is made with three different gripping faces, allowing one unit to accommodate most holding jobs. Five sizes are available: 1½, 3, 6, 9 and 12 in. Made by **Centinela Industrial Supply Co.**, 11930 Inglewood Ave., Hawthorne, Calif.

For more details circle NED-4545 on enclosed inquiry slip

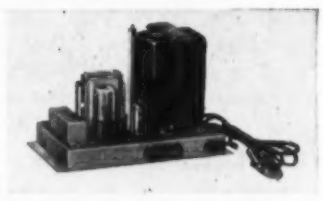
EVAPORATIVE AIR COOLERS of down discharge type



Made in capacities from 3700 to 6600 cfm, line of five down discharge evaporative air coolers is built in such a manner that cool air discharges through the bottom, thereby permitting more simple installation on roofs. Units can be installed without exterior ductwork, eliminating at least one elbow and one duct joint in all installations, and making possible shorter duct run. No clog, Sta-Fresh filters, Grip-Lock filter holders, Free-Flo externally adjusting water troughs and Uni-Weld construction are incorporated. Made by **Essick Mfg. Co.**, 1952 Santa Fe Ave., Los Angeles 21, Calif.

For more details circle NED-4546 on enclosed inquiry slip

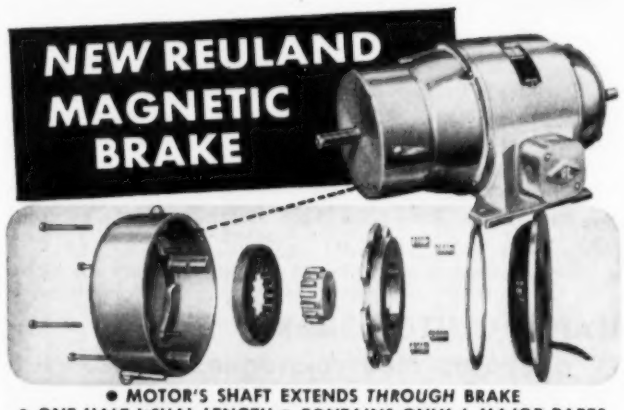
CONSTANT CURRENT SUPPLY provides direct current source



Designed primarily for use with potentiometer indicators, recorders and controllers, where automatic standardization is not feasible or where use of batteries is not desirable, this electronic constant current supply provides a steady direct current source from an alternating current line. Unit can also be used with resistance thermometers, strain gages or other devices requiring a constant direct current. Standard unit has 10 ma output at 1.4 v dc with stability well within the limitation of plus or minus 1/10 of 1 per cent. Other voltages and current are available. Model 50220 supply consists of regulated input transformer, a 6 x 4 rectifier, 5651 voltage reference and a 6SN7 control tube. Made by **Weston Electrical Instrument Corp.**, 617 Frelinghuysen Ave., Newark 5, N. J.

For more details circle NED-4547 on enclosed inquiry slip

NEW REULAND MAGNETIC BRAKE



• MOTOR'S SHAFT EXTENDS *THROUGH* BRAKE
• ONE-HALF USUAL LENGTH • CONTAINS ONLY 6 MAJOR PARTS

The Reuland Magnetic Brake is a completely new approach in brake design.

Instead of complicated linkage, the quick acting set and release action is *directly* between the solenoid and the armature. Also, this one-piece "doughnut" type solenoid permits the motor's output shaft to extend completely through the brake, allowing full use of two power-take-off shafts, if desired. Manual release, with automatic re-set, permits hand rotation of shaft when required.

This new unit provides automatic adjustment for lining wear. Its length and weight are approximately one-half that of conventional brakes. Reuland Magnetic Brakes are available in 3, 10 and 25 foot pound continuous duty ratings—15 and 35 foot pound intermittent—and provide versatile mounting adaptability.

Write for new engineering folder No. MB-2000-5

RE REULAND ELECTRIC CO.
ALHAMBRA, CALIFORNIA • DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle NED-4548 on enclosed inquiry slip

ADHERES to almost any metal
INVISIBLE on all of them

DULAC CLEAR UNIVERSAL LACQUER #462—

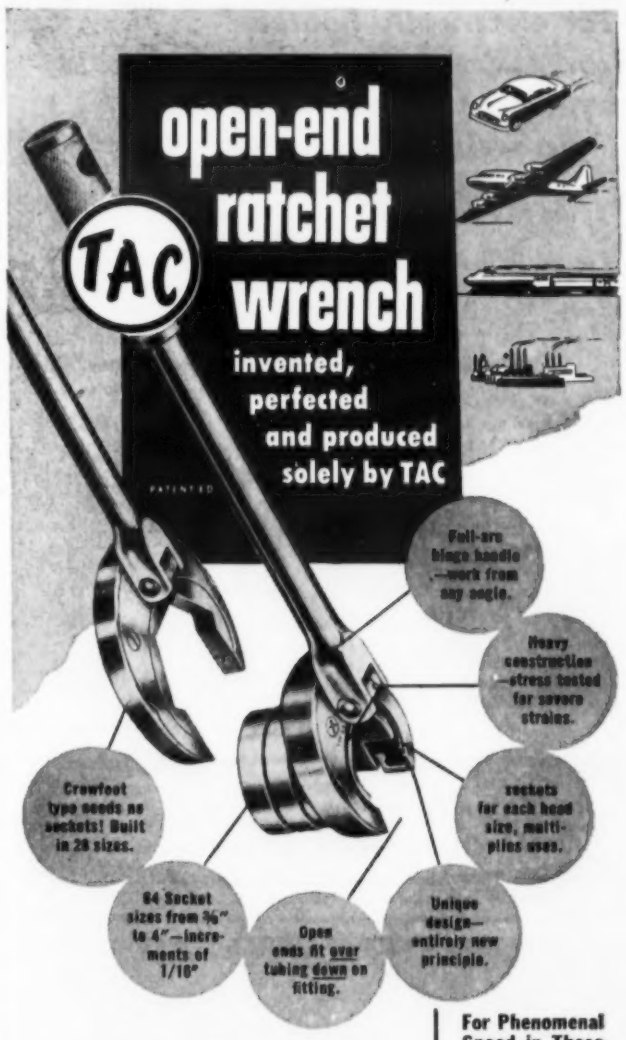
Here is a *single* water-white lacquer with remarkable adhesion to practically *all* metals. Withstands salt spray and weatherometer tests for exceptionally long periods. Resists heat, cold, weather, stain, perspiration. Dries out of dust in 5 to 10 minutes . . . hard in one hour. Applied by spray or dip.

PIONEERS IN PROTECTION

For complete information, write for Technical Data Bulletin #110.

MAAS & WALDSTEIN CO. 438 RIVERSIDE AVE. NEWARK 4, N. J.
Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill. • Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.
MANUFACTURERS OF INDUSTRIAL FINISHES

For more details circle NED-4549 on enclosed inquiry slip



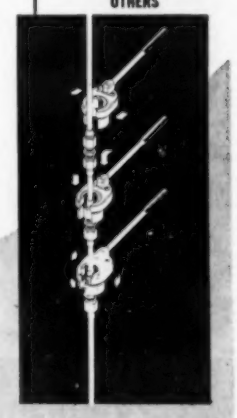
Volume-manufactured in two styles—the socket type and the Crowfoot type, TAC Open End Ratchet Wrenches are scoring phenomenal time and labor savings throughout all Industry.

It is a matter of record that heretofore no tool was made that could — *in a limit of 7° ratcheting arc* — successfully tighten or back off nuts or fittings on tubing or other standing center assemblies. The speed with which TAC can complete difficult wrenching jobs, in anybody's hands, is amazing.

Our plants are currently producing at capacity for all the Armed Forces and for Defense industries.

For Phenomenal Speed in These Wrenching Jobs

ELECTRICAL CONDUIT
HYDRAULIC LINES
LUBRICATION LINES
ENGINE FUEL LINES
PNEUMATIC LINES
REFRIGERATION
AIRCRAFT
RAILROAD EQUIPMENT
RIGGING EQUIPMENT
REFINERY EQUIPMENT
CHEMICAL LINES
AUTOMOTIVE EQUIPMENT
WATER AND GAS LINES
. . . AND DOZENS OF OTHERS



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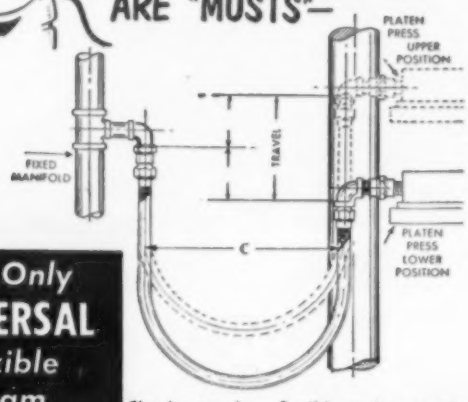
TAC

TUBING APPLIANCE COMPANY
10321 ANZA AVENUE
Los Angeles, California

For more details circle NED-4550 on enclosed inquiry slip

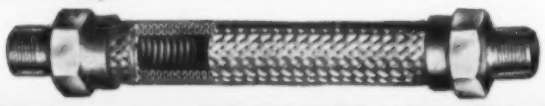
WHEN BOTH STEAM and MOTION ARE "MUSTS"—



Use Only UNIVERSAL Flexible Steam Connections

They're tough — flexible and economical. Widely used for movable platen presses, tire molds, laundry pressing machines and similar equipment requiring flexing many times per hour. Available in lengths to your specifications and equipped with heat-proof male and union female connectors as required.

Write for Catalog U-101 and data sheet showing proved method for installing Universal Seamless Flexible Metal Hose in vertical loops.



UNIVERSAL METAL HOSE CO.
2155 SOUTH KEDZIE AVENUE CHICAGO 23, ILLINOIS

▲ For more details circle NED-4551 on enclosed inquiry slip ▲

For electrically heated compound melters, THE FIRST PLACE TO INQUIRE IS STA-WARM

There's a world of difference in various methods of melting compounds . . . *and in various makes of compound melters.*

Leading the field is Sta-Warm, with a wide variety of models and sizes, with a basic design that is highly efficient and proved satisfactory, with "know-now" to solve unusual compound melting, dispensing and conveying problems.

Ask Sta-Warm today for practical recommendations.

Left: Soft metal pouring pot
Center: 30 gal. tank with power agitator
Right: 5 gal. dispensing heater.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

▲ For more details circle NED-4552 on enclosed inquiry slip ▲

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

Save Money

OVER 9,000 ITEMS INCLUDING

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

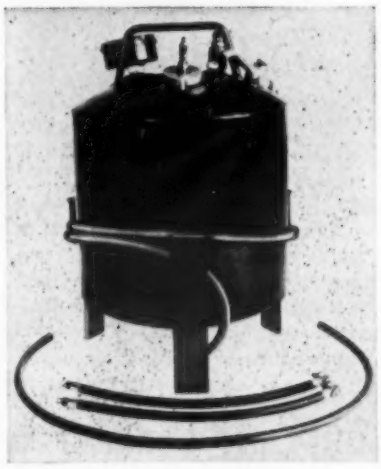
▲ For more details circle NED-4553 on enclosed inquiry slip ▲

CRAWLER CRANE
acts as shovel, dragline, pull shovel

Machinery platform of model 375 BC ¾-yd crawler crane is an integral, rolled steel, electrically welded unit. Falling in heavy duty 45,000-lb class, crane is available with choice of crane, shovel, dragline or pull shovel fronts. Track pads are double-walled steel castings with full length pins. Manten or Corten lightweight alloy steel is used in the boom to minimize dead weight and increase pay load. High speed boom hoist with controlled lowering arrangement is standard equipment. Boom radius can be changed without danger of dropping the boom. Dipper trip is electric push-button operated. Made by **American Hoist & Derrick Co.**, 65 S. Robert St., St. Paul 1, Minn.

▲ For more details circle NED-4554 on enclosed inquiry slip ▲

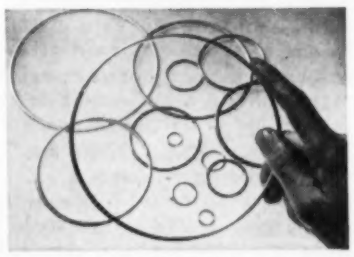
FILLER-BLEEDER TANKS
for use in hydraulic systems



Developed for use in servicing hydraulic systems, this filler-bleeder tank holds 2½ gallons of oil and meets military specification No. MIL-T-5182. It is adaptable for use with all types of hydraulic systems in automotive, aircraft and other equipment. Tank is equipped with filler cap, air inlet valve, pressure gage, relief valve, automatic shutoff valve within the tank, dispensing hose and control valve. Unit operates efficiently in temperature range from −65° F to 130° F. It is pressure tested at 300 psi. Made by **Superdraulic Corp.**, 14258 Wyoming Ave., Detroit 4, Mich.

▲ For more details circle NED-4555 on enclosed inquiry slip ▲

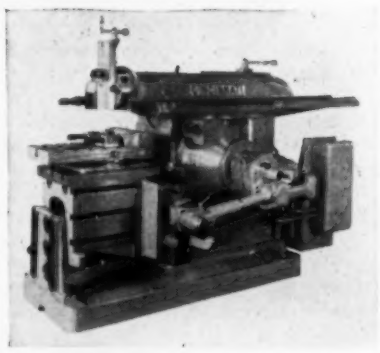
METALLIC O-RINGS
for metal-to-metal static sealing



Positive metal-to-metal static sealing wherever problems of heat, pressure, corrosive liquids or gases are involved is provided by UAP/WILLS metallic O-rings. These hollow metal tubing rings filled with inert gas at 600 psi are dimensionally stable under heat or cold, are not affected by age and are impervious to oils, gases or aromatic mixtures. O-rings can be installed in present ring grooves, in free machined recesses, or with special compression limiting devices, without grooves or recesses. They will hold against pressures as high as 20,000 psi and withstand temperatures limited only by the "physicals" of the metal. Standard rings of stainless steel, or of mild steel plated with cadmium or nickel are available for experimental uses in sizes from 11/16 to 40 in. OD in increments of 1/16-in. Made by **United Aircraft Products, Inc.**, P. O. Box 1035, 1158 Bolander Ave., Dayton 1, O.

▲ For more details circle NED-4556 on enclosed inquiry slip ▲

SHAPER CLUTCH-BRAKE
operates electro-magnetically



Available on all sizes of Cincinnati shapers is an electro-magnetic clutch and brake which insures instant starting and stopping with a single fingertip control lever. Offered as standard equipment, unit has ram which can be positioned quickly and accurately for setting tools by the instant action of clutch and brake. Operation is without grab and there is no adjustment required for the life of the friction surfaces, estimated to be up to 15 years with normal operation. Torque remains constant throughout the operating life. Made by **Cincinnati Shaper Co.**, Garrard & Hopple Sts., Cincinnati 25, O.

▲ For more details circle NED-4557 on enclosed inquiry slip ▲

NEW! DODGE SLIDE-SET VISE

Cut away view

SLIDES IN "NEUTRAL"!
INSTANT ACTION!
GRIPS CONVENTIONALLY!
FULL POWER!

● Entirely new in principle, with patented fast slide action that speeds work, reduces operator fatigue, saves wear on parts. All the power of a heavy conventional vise (weighs 58 pounds). Jaw slides in "neutral" before you lock it by turning handle in conventional way. No tedious "spinning" in and out. No-Pinch handle protects against blood blisters. Every Dodge Slide-Set pays dividends in greater efficiency and production. *Write now for free Bulletin.*

Dodge Manufacturing Corporation, 2100 Union St., Mishawaka, Indiana

DODGE of Mishawaka, Ind.

▲ For more details circle NED-4558 on enclosed inquiry slip ▲

Here's another Instance where D.P.S MOTORIZED HOPPER UNITS *are proving A HIGHLY PROFITABLE INVESTMENT!*

Pictured is a special D. P. S. machine designed to insert and crimp into place the terminal contacts on the ends of spark plug wires used in the automobile industry. By using a motorized Hopper Unit, it entirely eliminated the fatiguing manual work of placing the terminal on the wire by hand, and inserting it into a small press to provide the crimping operation. Through the automatic selecting and feeding of the brass terminal clips, the machine's output is governed only by the operator's dexterity in inserting the wire in the nest and pushing an electric foot switch. The machine eliminated what was formerly a bottleneck in this phase of the automobile industry.

D. P. S. POWER-DRIVEN EQUIPMENT CAN HELP YOU SPEED-UP YOUR ASSEMBLY PRODUCTION

Tell Us Your Problem

SEND FOR CATALOG DESCRIBING D. P. S. HOPPER UNITS • POWER SCREWDRIVERS • NUT DRIVERS • SPECIAL ASSEMBLY MACHINES

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICHIGAN

▲ For more details circle NED-4559 on enclosed inquiry slip ▲

For **AIR DUCTS** and **Recirculating OVENS**

Needing Temperatures From 400° F TO 1,000° F

CHROMALOX

TYPE TDH Heavy-Duty *Electric* HEATERS

Quickly and easily installed CHROMALOX Type-TDH Heaters give efficient, dependable heat for core drying, heat treating, annealing ovens, air ducts and similar applications. Operating temperatures up to 1000° F are easily achieved and accurately maintained by thermostats. Standard units in 6 Kw to 60 Kw ratings. An Application Engineer will show you how these and other CHROMALOX Heaters give you year round service with increased efficiency at less cost. Write today for details.

IF YOU USE HEAT

Get this Useful Catalog

It's loaded with information on many of the 15,000 types, sizes and ratings of Chromalox Heating Units and Equipment.

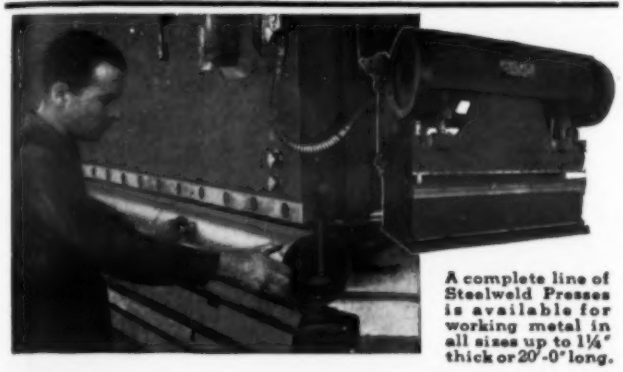
EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other advertisement on page 4

CHROMALOX 18-90

ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle NED-4560 on enclosed inquiry slip ▲



A complete line of Steelweld Presses is available for working metal in all sizes up to 1¼" thick or 20'-0" long.

TUBES — Round, Square, Hexagon
MADE WITH BENDING PRESSES

Small diameter cylinders, square and hexagon tubing, and other closed shapes are easily made with simple dies on Steelweld Presses. The same machines are used for standard bending work, multiple punching, corrugating and various forming operations.

Because Steelwelds are such all around useful tools, we urge you to check on their many possibilities for serving your plant profitably.

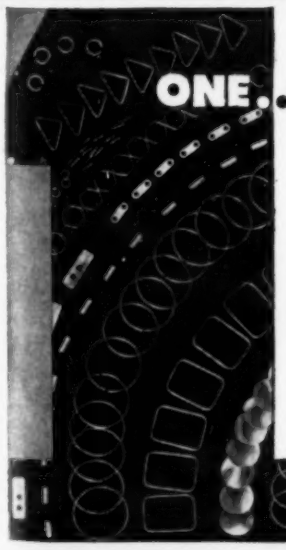
STEELWELD BENDING PRESSES CATALOG No. 2010

Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6643 East 281st St., Wickliffe, O.

STEELWELD PRESSES

▲ For more details circle NED-4561 on enclosed inquiry slip ▲



ONE..Good Way TO SAVE PRODUCTION TIME

KESTER SOLDERFORMS

For Soldering with flame, carbon-resistance, oven, induction and conventional iron

DIMENSIONAL STABILITY Every single Kester Solderform is made exactly to specification. What's more . . . they are delivered that way to you, in perfect condition, because of Kester's scientific packaging.

Write for sample assortment or test samples for your specific job.

KESTER SOLDER

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, New Jersey • Brantford, Canada

▲ For more details circle NED-4562 on enclosed inquiry slip ▲

SAMPLE COUNTING TIMER
for use with scaling instruments

Designed to measure elapsed time in 1/100-minute for accuracy in radioactive sample counting, model T100 timer operates with all scaling instruments made by this and other companies. Unit operates on standard 110-v, 60-cycle current and has an off-on switch in the line cord. It can be quickly reset to zero when counting is completed. Body of timer is cast aluminum with scuff-proof gray hammertone finish. Dimensions 4 x 3⅝ x 3⅜ in. Made by **Nuclear Instrument & Chemical Corp.**, Dept. NED, 229 W. Erie St., Chicago 10, Ill.

▲ For more details circle NED-4563 on enclosed inquiry slip ▲

HEAVY DUTY ARC WELDERS
made in three portable models

Heavy duty industrial alternating current arc welders made in three portable models feature eye level control panel which simplifies heat selection from all operating angles. Model 200A operates from 110 or 220 v with heat range of 20 to 200 amp and handles rods up to 3/16 in. on work up to 1¾ in. thick. Models 300A and 400A operate from 220/440 v lines, each with 36 different heat stages ranging from 30 to 300 amp and 400 amp, respectively. All units are completely furnished with operating accessories. Made by **Trindl Products, Ltd.**, Dept. NE, 17 E. 23rd St., Chicago 16, Ill.

▲ For more details circle NED-4564 on enclosed inquiry slip ▲

LIGHTWEIGHT SOLDERING IRON
for soldering in close quarters

Pinpoint high-speed soldering in close quarters, as called for in radio, electronic and instrument manufacturing, is made easy with standard voltage, lightweight soldering iron. Unit features long lasting iron-clad corrosion-resistant working surface, is 10½ in. long, and has 3/16-in. shank and ¼-in. tip. Iron is heated by G-E Calrod heater which protrudes into tip for efficient heat transfer. It weighs 8½ oz, is rated at 60 w, 120 volts and has interchangeable parts for rapid repair. Flanged plastic handle allows iron to be laid down temporarily without a stand. Made by **General Electric Co.**, Industrial Heating Dept., Schenectady 5, N. Y.

▲ For more details circle NED-4565 on enclosed inquiry slip ▲

Bin Stuck Lately? Use this space to make a rough sketch or send details of the troublesome *bin* or hopper

Name _____ *Title* _____
Address _____
City _____ *State* _____

Move, Settle or Package Quickly with *Cleveland* Air Vibrators

THE CLEVELAND VIBRATOR CO.
2745 Clinton Avenue • Cleveland 13, Ohio

▲ For more details circle NED-4566 on enclosed inquiry slip ▲

what type of **CUSTOM BUILT WIRE CLOTH PARTS** do you need

heat treating? pickling? plating? filtering? handling?

You can be sure of getting exactly what you need in custom built wire cloth parts when you call—**CAMBRIDGE.**

With more than 30 years experience in this field, we can work from your own prints . . . or, if none are available our design engineers will draw up prints based on your description of the job the part must do.

Our newly expanded production facilities include equipment for cutting, forming, bending, shaping and welding of any metal or alloy in sheet, rod, or wire cloth form . . . as well as our large battery of wire cloth looms.

Tell us your needs. Let us tell you how economically and quickly we can fill them. Write direct or call your Cambridge field engineer. Look under "Baskets-Wire" in your classified telephone directory.

FREE CATALOG describes Cambridge facilities for fabricating metal specialties. Write for your copy today.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Department C
Cambridge 5, Md.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

▲ For more details circle NED-4567 on enclosed inquiry slip ▲

where ELSE can you use PRINT-AD-STRING
Reg. U.S. Pat. Off.

the "TIE that TALKS"?

Tie up your products with Print-Ad String, and wherever they go they tell people your name or slogan, they give directions, they measure footage, they provide grade markings—they tell whatever you want told . . and tell it in a novel, colorful way.

Here's a tremendously strong COTTON tie—in thicknesses down to .003, widths down to ⅛", in any color or combination of colors you want—a tie that won't mar or dent the edges of articles tied in it—won't slip in the knot—won't stretch—and adds a smart touch to your package.

Mighty useful for manufacturing short-cuts, too. Be informed! Mail coupon now for FREE booklet full of valuable ideas!

BETTER TYING

Holds parts firmly for assembly, cutting, drilling . . Holds parts in finished assemblies . . Measures running footage . . Gives directions, grade marks, identifications.

BIG HELP IN THE PLANT

Good-looking all-cotton ties! . . Flat, won't mar or dent edges of boxes or merchandise . . Won't slip in the knot . . Non-stretch, great strength . . Also used as rip-cord opener, from candy bars to survival kits . . Ties anything!

MAIL FOR FREE IDEA BOOK!

Dept. C - Chicago Printed String Co.
2300 Logan Blvd., Chicago 47, Ill.

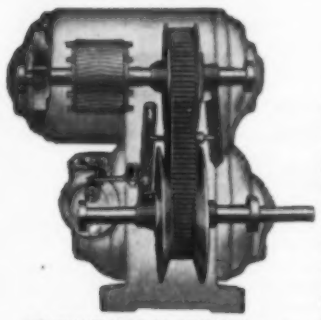
GENTLEMEN: Without cost or obligation send me your FREE Idea Book.

My Name _____
Title _____
Company _____
Address _____
City _____ State _____

▲ For more details circle NED-4568 on enclosed inquiry slip ▲

RIGID TESTS FOR A TOUGH JOB MET BY SPEED-TROL

Speed-Trols were selected to drive our Oblique Tilting Tumbling Barrels only after rigid tests, reports D. R. Graham of Columbia Belt Hook & Mfg. Co. Speed-Trols with integral reduction gears and positive oil seals withstood our every requirement such as starting under maximum load and running with shaft in any position from 45° above to 45° below horizontal.



STERLING SPEED-TROL

OUTSTANDING FEATURES: Infinite speeds—positive speed regulation—fingertip control—large indicator—positive pulleys—no springs—belt tension in proportion to load—protected—streamlined—Herringbone Rotor—through ventilation—versatile mounting—NEMA dimensions—shock absorbing—quiet operation—rugged—compact—dependable—long life.

70 ILLUSTRATIONS showing how Sterling Electric Power Drives reduce production costs. Write for Bulletin No. B-128.

STERLING ELECTRIC MOTORS

Plants: New York City 51; Van Wert, Ohio; Los Angeles 22; Hamilton, Canada; Santiago, Chile. • Offices and distributors in all principal cities.

▲ For more details circle NED-4569 on enclosed inquiry slip ▲

Unsurpassed for... *Quality*

with dependable service
design and workmanship
choice of materials
underwriters' acceptance

*For over 45 years, McGill has produced superior electrical units of sound design and mechanical excellence, that have been universally accepted by industry, commerce and in the home. Users frequently report Levolier switch installations operating as usual after many times the years of service expected of an ordinary switch with equal capacity. Specify Levolier switches — it always pays to use the best.

Available from your electrical wholesaler

McGill Levolier Model 41 Switch is Unconditionally Guaranteed to provide the most dependable circuit control with the smallest screw terminal mechanism for the longest service available in a 6 Amp. "T" rated 125 volt switch. Universal lever control, brass cap and casing, only 5/8" thick. Write for Catalog No. 49.

Underwriters' Laboratories Inc., Inspected

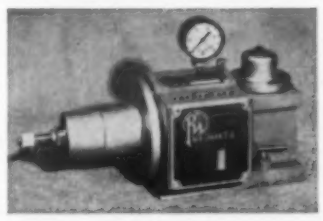
ONLY McGILL MAKES Levolier SWITCHES

McGILL electrical specialties

McGill Manufacturing Co., Inc., 151 N. Campbell St., Valparaiso, Ind.

▲ For more details circle NED-4570 on enclosed inquiry slip ▲

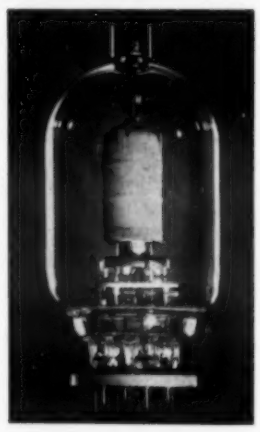
INTERNAL GRINDING SPINDLES operate up to 100,000 rpm



Accurately finished holes can be produced by high speed air driven internal grinding head which produces most efficient cutting speed of approximately 5000 sfpm for grinding wheels or points ranging from 5/32 to ¾-in. Low range unit can be adjusted to hold any selected speed with range from 35,000 to 50,000 rpm, while high range unit operates between 60,000 and 100,000 rpm. Heads operate from air supply providing about 25 cu ft at 80 to 100 psi. A line filter cleans the air before it enters the head which is operated by opening a plug valve between the supply and the turbine with a lever located on the front side. A needle valve on top of head, used in conjunction with a pressure gage and speed chart, selects the desired speed. Units operate under grinding load with very small drop from preset idling speed. Air bearings are used to insure smooth operation at high speeds. Made by **Niles-Bement-Pond Co.**, Pratt & Whitney Div., 20 Charter Oak Blvd., West Hartford 1, Conn.

▲ For more details circle NED-4571 on enclosed inquiry slip ▲

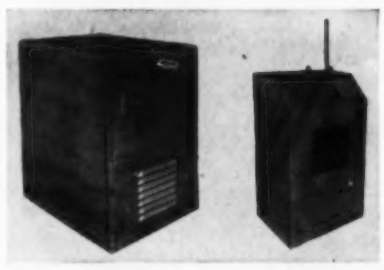
DIODE TUBE for high voltage pulse uses



Recommended for use in pulse generators where repetition rate is 2000 pulses per second or less and peak forward current is 10 amp, Los Gatos type 719A Clipper diode has peak inverse rating of 25,000 v. Tube is conservatively rated at 75 w and has black body heat dissipating anode surface called Sintercote. Large and designed for sturdiness, the cathode is entirely supported from the base of the tube. The heater draws 7 amp at 7 v. Tube has a maximum height of 5⅞ in., maximum diameter of 2 9/16 in. and fits a standard No. 234 socket. Made by **Lewis & Kaufman, Inc.**, 106 El Rancho Ave., Los Gatos 28, Calif.

▲ For more details circle NED-4572 on enclosed inquiry slip ▲

CRANE CAB COOLER heats, cools and filters air



Capable of maintaining a temperature of 80 to 85° F within a crane cab when the surrounding ambient temperatures reach 130° F, model C-3SP crane cab cooler is a split type unit of 3-hp size. It supplies continuous ventilation and is equipped with electric strip heaters for winter heating, dust and dirt filters and activated carbon canisters for fume and odor removal. Operation and control for summer and winter temperatures is automatic. Compact evaporator section can be installed within the cab, while condenser section can be located in any convenient place on the crane. Two sections are connected by refrigerant piping. Made by **Dravo Corp.**, Air Conditioning & Combustion Dept., Dept. NED, Dravo Bldg., Pittsburgh 22, Pa.

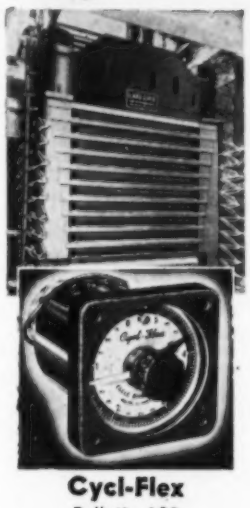
▲ For more details circle NED-4573 on enclosed inquiry slip ▲

"DONUT" TRANSFORMERS for use with inserted primaries

Demand for larger inside diameters of "donut" instrument current transformers for use with inserted primaries is met by model 321 series which has maximum outside diameter of 5 in., maximum thickness of 1.75 in. and minimum inside diameter of 2.25 in. Capacity by NEMA standards is 2.5 va. Accuracy is 1.2 per cent of full rated capacity. Transformers are intended for use with ammeters, relays or other devices where phase angle is not important, the error being between 0 and plus 2 degrees, depending upon ratio and working current. They are made for frequencies of 25 to 133 cycles, with units for use on higher frequencies available on order. Transformers are insulated for use on 2400-v rms service. Two-foot color-coded leads are provided. Ratios offered include 1000/5, 1200/5, 1500/5, 2000/5, 2500/5, 1000-2000/5. Special ratios are available. Made by **Associated Research, Inc.**, 3786 W. Belmont Ave., Chicago 18, Ill.

▲ For more details circle NED-4574 on enclosed inquiry slip ▲

AIDED BY **EAGLE timing**



The Rock Island Millwork Co. of R. I., Ill. are now converting huge piles of waste sawdust into large sheets of "RESINWOOD," used in place of other hardboards for unlimited items such as door panels, cores, and the finest furniture.

Eagle "Cycl-Flex" timers automatically operate a huge three-story press, repeating many properly timed delays for increased production and the highest quality product.

Cycl-Flex
Bulletin 120

AN EAGLE TIMER FOR EVERY TIMING PROBLEM!

EAGLE SIGNAL *Industrial Timers*
EAGLE SIGNAL CORPORATION MOLINE, ILL.

▲ For more details circle NED-4575 on enclosed inquiry slip ▲

LISTEN TO YOUR COMPRESSOR
frequent running costs you money!

CHAMPION
aero-dynamic design...
cuts running time 6 ways!

Compressors that run too frequently cost you money! Excessive running causes excessive wear, raises electric costs by increasing consumption, and slows work through reduced pressure. Champion Air Compressors are Aero-Dynamically engineered to deliver cool air to the receiving tank in a minimum of running time. Get all the facts on Champion's Aero-Dynamic Compressor design.

this FREE MANUAL shows you how to select the proper air compressor. Write for your copy TODAY!

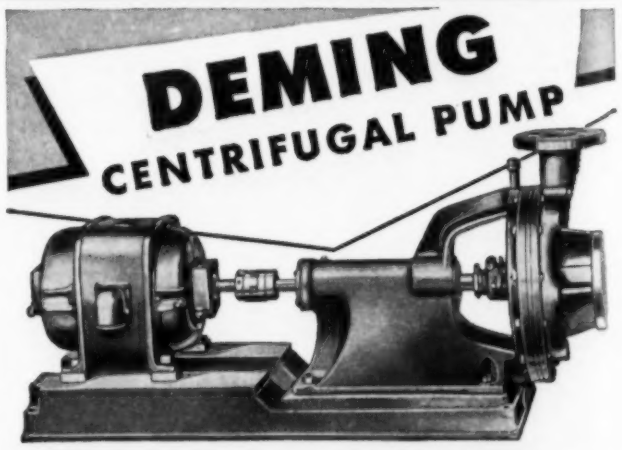
5784

CHAMPION PNEUMATIC MACHINERY CO.
837 N. Pleasant Street Princeton, Illinois

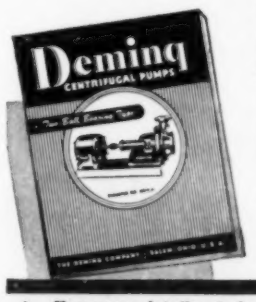
PRESSURE CLEANERS • AIR HOSE REELS • AIR ACCESSORIES

▲ For more details circle NED-4576 on enclosed inquiry slip ▲

DEMING CENTRIFUGAL PUMP



• Designed with separate liquid end to permit economical use of special alloys on parts coming into contact with corrosive liquids. This saves you money on first cost and upkeep cost. Built in full range of capacities from 10 to 3600 G.P.M. in sizes 1" to 10" discharge. Can be furnished for either the standard electric motor drive (as illustrated) or for gasoline engine or belt drive. Write for BULLETIN 4012-A.



THE DEMING CO.
520 BROADWAY
SALEM • OHIO

▲ For more details circle NED-4577 on enclosed inquiry slip ▲

VARIABLE SPEED CONTROL

Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameter are increased to transmit greater H. P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameter, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Advt.**

▲ For more details circle **NED-4578** on enclosed inquiry slip ▲

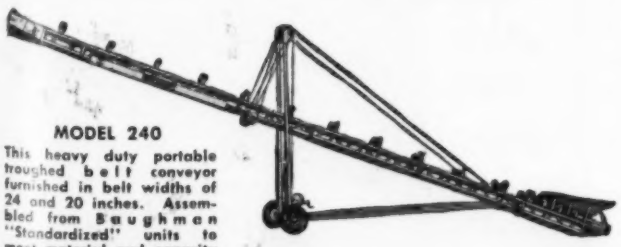
GET THESE "HI-SPEED" FEATURES

- "Standardized" Units usually shipped from stock.
- "Job-Fitted" . . . order assemblies to meet your requirements.
- Set up on the site in a few hours time.
- Bridge-like design—braces welded in correct position for maximum strength.
- Constructed to conform to strictest engineering practices.

AND DEPENDABLE "HIGH-SPEED" SERVICE

Baughman HI-SPEED Conveying Equipment is the result of practical experienced engineering—proven in operation. It will meet exact requirements, increase output and reduce operating costs. Baughman "Standardized" production methods cut equipment expenses. Quality materials and expert construction minimize maintenance costs. We welcome the opportunity to study your material handling problems . . . there is no obligation.

1. Conveniently located distributors from coast to coast.
2. Conveyors shipped in sections for lower freight costs.
3. Standardized construction . . . replacement parts immediately available.



MODEL 240

This heavy duty portable troughed belt conveyor furnished in belt widths of 24 and 20 inches. Assembled from Baughman "Standardized" units to meet material and capacity requirements. Mast type hoists recommended for conveyors from 50 to 70 feet long. Available with Swivel Wheels for easy maneuvering, etc. (Special order only.)

If It's HI-SPEED . . . It's BAUGHMAN

BAUGHMAN — manufactured by BAUGHMAN MANUFACTURING CO., Inc

176 E. ARCH STREET JERSEYVILLE, ILL.

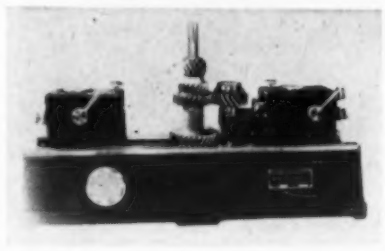
▲ For more details circle **NED-4579** on enclosed inquiry slip ▲

NESTING TYPE SHOP CART
carries parts, tools or materials

Conveyance of tools, small machines, raw materials, parts and other bulky or heavy items are some of uses for Nest-Kart telescoping push carts. They have an upper basket capacity of 4500 cu in., plus a large built-in lower basket. Smaller baskets for small parts are available for attachment inside the standard baskets without impairing the nesting feature. Lower shelf can carry bulky items or can be fitted with a special basket. The ball bearing casters have ball bearing, nonmarring rubber wheels. Carts are well balanced and, when nested, each additional unit requires but 6 in. of additional space. Made by **Continental Fixtures Corp.,** Dept. E, 1104 W. Main St., Oklahoma City, Okla.

▲ For more details circle **NED-4580** on enclosed inquiry slip ▲

HELIX ADAPTOR & ATTACHMENT
simplifies gear checker setup



Efficiency of the Orlandi gear checker, used in every stage of production from blank to finished gear, is increased with development of an adaptor and rolling attachment. Adaptor simplifies setup for checking helix angle to point of practically eliminating mathematical computations. Rolling attachment for use with master gear makes possible rapid check of pitch diameter and concentricity accurate to 0.0001-in. With this attachment, backlash can also be checked with mating gears or master gears. Among other operations gear checker performs is checking concentricity without a master, parallelism, backlash, root diameter, crown on face of tooth, tooth to tooth spacing and accumulated error at 90 or 180 degrees. Instrument also checks concentricity of outside diameter of ground gears, including those with odd number of teeth where micrometer cannot be used. Made by **Orlandi Gear & Machine Co.,** 16195 Meyers Rd., Detroit 27, Mich.

▲ For more details circle **NED-4581** on enclosed inquiry slip ▲

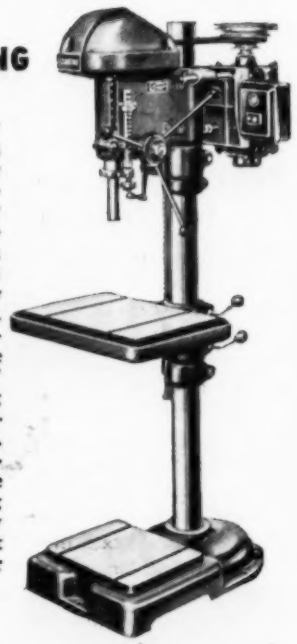
DO YOU KNOW? Immediate service on radium coating of any type of dial is now available. These "glow in the dark" dials are applicable in aircraft, ships, engine rooms, industrial plants and anywhere that it is necessary to see the dial in a minimum of illumination. Service is offered by Fayma Dial Refinishing Co., 118 W. 47th St., New York 19, N. Y.

▲ For more details circle **NED-4582** on enclosed inquiry slip ▲

Atlas CLAUSING PRECISION MACHINE TOOLS — DIVISION ATLAS PRESS COMPANY KALAMAZOO, MICHIGAN U.S.A.

18" HEAVY DUTY DRILL PRESS

. . . FOR BETTER HEAVY DUTY DRILLING



Get these important new drilling advantages with a Clausing 18" Drill Press. The 6½" spindle travel gives bigger job capacity, permits better use of production chucks. Drilling capacity: ¾" in steel, 1" in cast iron. Spindle nose is No. 3 MT. There's 6" to 13" *more* capacity from spindle to table. Spindle is bigger, stronger—handles larger tools. Exclusive vernier control provides .001" depth accuracy. Positioning mechanism saves set-up time—moves *both* head and table. Massive construction, precision-machining throughout, and the smoothness of 5 ball bearing races insure exacting accuracy on every operation. Contact your Clausing distributor, or write for catalog.

CLAUSING DIVISION

ATLAS PRESS CO., 523 N. Pitcher St., Kalamazoo, Mich.

▲ For more details circle **NED-4583** on enclosed inquiry slip ▲

MOLDED CARBON and GRAPHITE *Specialties*

Seldom can any material surpass carbon and graphite for practical solutions to problems involving friction, high temperatures, corrosion, shaft sealing, and arcing.

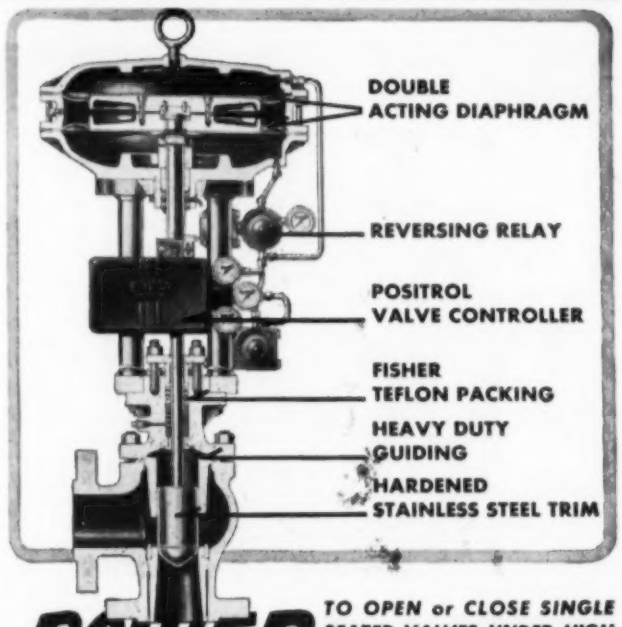
Let This Booklet Help You!

Write on company stationery for your copy of the Stackpole Carbon Specialties Book 40. Besides describing dozens of Stackpole items, it contains interesting evidence of the amazing versatility of carbon and graphite in modern design and engineering.

STACKPOLE

STACKPOLE CARBON COMPANY
St. Marys, Penna.

▲ For more details circle **NED-4584** on enclosed inquiry slip ▲



POWER TO OPEN or CLOSE SINGLE SEATED VALVES UNDER HIGH PRESSURE DROP CONDITIONS

FISHER AMT*

Fisher Type 5700-458 "AMT" features full pneumatic performance—no springs, no levers or weights. Develops up to 5,000 lbs. stem thrust with 30 lbs. air supply. Designed for fast stroke action. Fully strokes inner valves in 13 seconds. Write for further information.

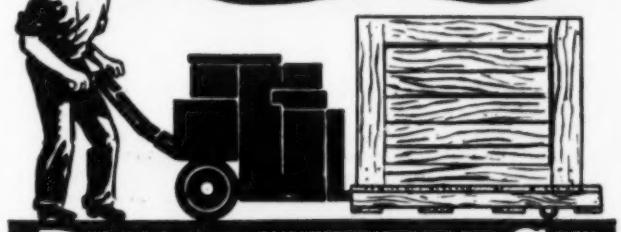
DIAPHRAGM MOTOR VALVES FOR HEAVY DUTY SERVICE

*AMT "Answer Me Twice". In action, pressure added to one diaphragm, subtracted from other.

FISHER GOVERNOR COMPANY MARSHALLTOWN, IOWA

▲ For more details circle **NED-4585** on enclosed inquiry slip ▲

FREE! Revolvator's new Truck Index helps you pick size, capacity and type to suit your needs. Send coupon today.



REVOLVATOR CO.

REVOLVATOR CO.
8832 Tonnele Ave., North Bergen, N. J.
Gentlemen:
We want to know, without obligation, all about Revolvator Go-Getter Pallet Type Liftrucks.
Name.....
Position.....
Company.....
Address.....

▲ For more details circle **NED-4586** on enclosed inquiry slip ▲

ask for
DANLY
precision
DOWEL PINS

Drive easier because tapered leading ends "pilot" Danly Dowel Pins into close fitting holes . . . resist upsetting because they're specially hardened (58 to 60 Rockwell C) . . . meet almost every requirement with two complete size ranges, one standard and one ground .001 oversize for enlarged holes.

Send for this free bulletin for helpful application data and catalog information.

DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Avenue, Chicago 50, Illinois

PRECISION DIE SETS . . . DIEMAKERS' SUPPLIES

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XACTO...
The Meter That CHANGED Liquid Handling Habits!

For over a quarter century Xacto meters have brought to industry after industry an entirely new and effective way to measure liquids . . . accurately . . . dependably.

Xactos accurately measure and safely handle more than 662 different liquids in processing, blending, packaging and many other operations. And it's done with a degree of economy never thought possible!

YOU JUST PUSH A BUTTON OR OPEN A VALVE!

Bowser Xacto meters have reduced the distribution and processing of liquids to the simple operation of pushing a button or opening a valve. For checking incoming deliveries, transferring, batching or recording consumption . . . for any liquid measuring job . . . there's no substitute for Bowser Xacto meters!

Available with straight reading, predetermining or ticket printing dials . . . and in sizes for any need!

• • •

Write for the facts on Bowser money-saving meters.

BOWSER, INC. 1381 Creighton Ave., Fort Wayne 2, Ind.

BOWSER
Regional Offices • Atlanta • Chicago • Cleveland • Dallas • Kansas City • New York • San Francisco • Washington, D. C. • Hamilton, Ontario

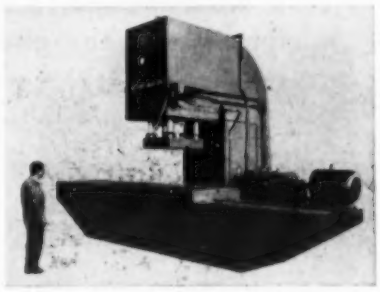
▲ For more details circle **NED-4588** on enclosed inquiry slip ▲

EMERGENCY LIGHT
operates instantly when power fails

Powered by rechargeable glass jar storage battery having visible ball float hydrometer, Watchmaster automatic stand-by light operates instantly when fuses blow or power fails. It is plugged into regular lighting circuit. Built-in trickle charger maintains battery in fully charged condition between emergencies and fast charger restores battery quickly after emergency. Choice of floodlights or sealed-beam lamp heads and either condulets for permanent wiring or cord and plug for semiportable installation can be furnished. Lamp heads are removable, and extra lamp heads are available for remote mounting. Made by **Carpenter Mfg. Co.,** 152 Master Light Bldg., Boston 45, Somerville, Mass.

▲ For more details circle **NED-4589** on enclosed inquiry slip ▲

HYDRAULIC STRAIGHTENING PRESS
positions work in two dimensions



Fast two-dimension positioning of work on hydraulic straightening press which features simplified operation is obtained by hydraulic systems which move press bed from side to side and plunger assembly from front to back. Thus, a number of blows can be struck on a single piece without changing the table setting. While actual straightening is performed at slow speed, advance and return is rapid. Three levers at front of bed control ram and bed motions, plus up and down motion of the slide. A fourth lever locks crown of press in position and transfers output of the pump to the system controlling the plunger motion. The Hydro-Dynamic circuit, as applied to this 100-ton press, consists of a high speed variable delivery rotary pump which controls the pressing speed and reversal without numerous controlling valves. Made by **E. W. Bliss Co.,** 13-76 Raff Rd. S. W., Canton, O.

▲ For more details circle **NED-4590** on enclosed inquiry slip ▲

PULVERIZING MILL
has output of 50 to 100 lb per hour

Capable of pulverizing any dry, grindable material to specifications without damage to molecular structure, this model Pony mill is powered by 1-hp motor and has capacity of 50 to 100 lb per hour. It is of impact type, and disintegration is accomplished by throwing material against impact surfaces and by impact of material against itself. Mill speed and fineness of screen used determines size of grind. Mill is thus custom assembled for each user. Made by **Mead Mill Co.,** 14621 E. Seven Mile Rd., Detroit 5, Mich.

▲ For more details circle **NED-4591** on enclosed inquiry slip ▲

RESISTANCE LIMIT BRIDGE
for production or laboratory use

Percentage deviation of unknown resistors from standard is indicated on large panel meter by type 1652-A resistance limit bridge. Deviation can be measured from an external standard or from an internal standard adjustable from 1 to 1,111,111 ohms in steps of 0.1-ohm. Maximum deviation is plus or minus 20 per cent and accuracy is between 0.2 and 0.5-per cent, depending upon application. Limit bridge can also be used to match one resistor to another, or as a conventional decade Wheatstone bridge for resistance measurements by the null method. To facilitate production measurements, test jigs can be connected directly to panel terminals. Made by **General Radio Co.,** Massachusetts Ave. & Front St., Cambridge 39, Mass.

▲ For more details circle **NED-4592** on enclosed inquiry slip ▲

ADD COMFORT . . . SPEED PRODUCTION
with Aerovent FAN
MAN COOLING
FANS

Keep your employees cool for more efficient work. Aerovent "Macheta" airfoil fans are efficient and economical.

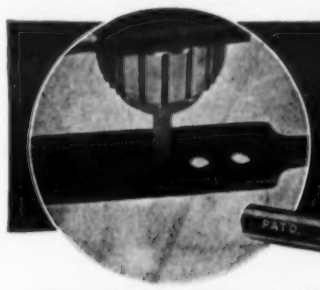
Certified Ratings PFMA

Model 39 Mancooler — 2, 4 or 6 blade Sizes 24" to 48"
Other Models: Direct Connected, Extended Shaft, Duct Type, Belt Driven, Pulley Drive. Sizes 12" to 144".

WRITE TODAY FOR ENGINEERING BULLETIN
AEROVENT FAN CO., Inc.
Ash & Brown Streets, Piqua, Ohio
Competent Sales Engineers in Principal Cities

▲ For more details circle **NED-4593** on enclosed inquiry slip ▲

Drill Hardened Steels without Annealing—



USE The New IMPROVED "HARDSTEEL" DRILL

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

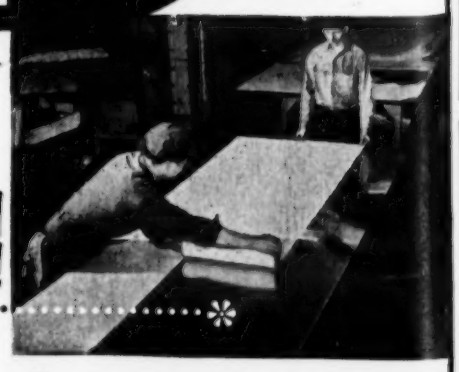
BLACK DRILL COMPANY, INC.
Division Black Industries
1380 East 222nd St. • Cleveland 17, Ohio

Also makers of— BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS
Write for information

▲ For more details circle **NED-4594** on enclosed inquiry slip ▲

Mystik Protecto-Mask

SAVE that polished surface!



Here's sure protection for those expensive, highly polished surfaces — stainless steel, aluminum, plastics, many more!

• Keep them protected during *fabrication, storage, in shipment.* • MYSTIK Protecto-Mask is *Self-Stik* . . . goes on easily from the roll to surface, peels off easily. Leaves no residue. • Protects against scratches, and production damage . . . cushions blows . . . shields against splatter from welding arc. Can be used for layout and diagramming.

Ask your supplier or write for full information and sample. Mystik Adhesive Products, 2657 N. Kildare, Chicago 39.

▲ For more details circle **NED-4595** on enclosed inquiry slip ▲

AMERICAN ELECTRIC
Model 275
MOTOR ALTERNATOR

1000 TO 1800 WATTS
400 CYCLE POWER SUPPLY
IN LESS THAN A 2 FOOT PACKAGE!

Small, light, compact, equally satisfactory on permanent or portable installations. Low speed—quiet operation. Meets power supply requirements for AN-E-19 equipment. Multiple units efficiently replace one single, large-capacity alternator . . . Save space, cost far less, protect against breakdowns!

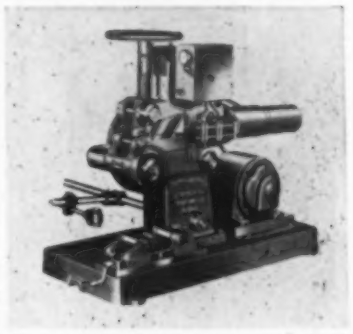
NEW PRINCIPLE uses no moving coils, brushes, springs etc.... *It's as completely wear-free as its ball-bearings!*

Capacities up to 1000 Watts single phase or up to 1800 Watts three phase. Single or 3 phase common-shaft motor drive. Larger capacities available.
WRITE FOR DETAILS!

AMERICAN ELECTRIC MOTORS
TRADE MARK
4011 Telegraph Road, Los Angeles 22, California

For more details circle NED-4596 on enclosed inquiry slip

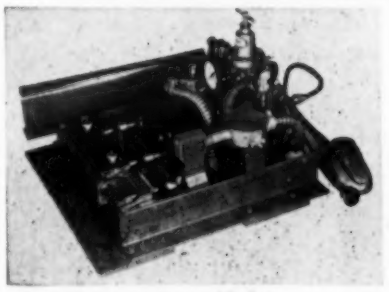
PIPE CUT-OFF MACHINE
cuts 12-in. diameter pipe and tube



Cutting pipe and tubing with diameters up to 12 in. is accomplished automatically with cut-off machine at speeds up to 60 pieces of this size tubing per hour. Smaller sizes are cut proportionately faster. Operator feeds pipe to adjustable set stop, steps on foot switch, and the air cylinder, electrical controls and air mechanism accurately gage speed at which blade approaches pipe. At same time pipe starts spinning slowly as blade engages it, then heavy cutting pressure is exerted. Blade is automatically retracted after each cut. Made by **Continental Machine Co.**, 1954 N. Maud Ave., Chicago 14, Ill.

For more details circle NED-4598 on enclosed inquiry slip

PACKAGE CODING MACHINE
attaches to packaging machinery



Cellophane, glassine, waxed paper, foil, tissue and similar wrapping materials can be coded automatically by Rainbow Trans-leaf coding machine, designed for attachment to packaging machinery. Machines are custom built for both continuous and intermittent types of automatic wrapping machines. Unit, which requires no operator, provides from 20 to 40 sq in. of imprint for 1 cent. Imprint is permanent, heat and pressure combining to produce an imprint in a wide range of colors. Brass or steel type used lasts for many impressions. Made by **Industrial Marking Equipment Co.**, Dept. NED, 454 Baltic St., Brooklyn 17, N. Y.

For more details circle NED-4599 on enclosed inquiry slip

SIGHT GAGE
can be observed at angle

Adaptable where it is desirable to observe the liquid level or the internal activity of tanks, vats or vessels, Reflex sight gage has standard visible length of 4½ in. Lengths to 12¾ in. are available. Liquid level is easily seen from angles up to 15 degrees off vertical or horizontal. Standard model has cast iron housing, fluted pyrex-type sight glass and asbestos gaskets, and is designed for temperatures to 500° F and vacuum or pressures to 15 lb. Transparent glass, and cast stainless steel or vitreous enameled cast iron housing are available. It mounts on existing vessels without burning or welding. Made by **Rucker Mfg. Co.**, 4516 Hollis St., Oakland 8, Calif.

For more details circle NED-4600 on enclosed inquiry slip

Quick Switches are a DAVEN Specialty

And the "specialty of the house" is double-barreled . . . first, choose from hundreds of standard units to satisfy your needs—for quick switch delivery . . . second, Daven can effect quick 'switches' or changes from standard units to special switches, by using components at hand. That, too, makes for speed, dependability, economy. Write for more detailed data.

THE DAVEN CO. 199 Central Ave. Newark 4, N. J.

For more details circle NED-4602 on enclosed inquiry slip

CORD SETS
That Are Right On The Beam

● Cords, Ltd. engineers and builds standard and special cord sets for any application. Proved dependability.

Most comprehensive stock of moulds and dies in existence for production of electronic cords and assemblies.

When you bring your cord problems to us you get the experience of the vast Essex Wire organization, plus integrated production of every component from wire bar to finished assembly. Write for details, explaining application.

WIRE SX PRODUCTS
CORDS LTD.
DIVISION ESSEX WIRE CORPORATION
121 DODGE STREET, DEKALB, ILLINOIS

For more details circle NED-4603 on enclosed inquiry slip

MORE SOLD THAN ANY OTHERS
Write for Catalog
OF USES AND SPECIFICATIONS

GENERAL
Industrial Pneumatic Tires

..SAVE TIME·LABOR·MONEY
Protect equipment and floors • Reduce Breakage

★ Wide Base Wheel
★ More Air Volume
★ More Stability
★ More Load Capacity
★ Longer Miles in Hi-Speed Service

Available separately or in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 27"—200 to 4000 lbs. cap. for low and high speeds.

Rigid CASTER FORKS *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

Send for Catalog • Dept. 4

THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

For more details circle NED-4597 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

LIGHTWEIGHT CHAMPION

BROAD VISION DUST AND SPRAY HOOD

WEIGHS ONLY 9 OUNCES . . . New design window assembly allows unobstructed vision in all directions. Does not interfere with the wearing of correction glasses. Heavy gauge plastic window provides impact resistance. Quickly replaced, when necessary, without use of tools.

WRITE FOR BULLETIN NO. 42

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-4601 on enclosed inquiry slip

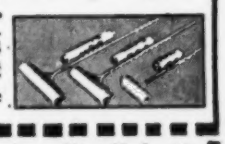
Hundreds of "on the job" tests prove that
PAINTING JOBS go FASTER — are SAFER — COSTS LESS
with the ARSCO

INDUSTRIAL PAINT ROLLER
FOR HEAVY DUTY

HERE'S WHY: Engineered for heavy duty, ARSCO ROLLERS *hold more paint*, by actual test, than any other roller or brush. *SAVE TIME* by covering more surface faster. *SAFER* because they cut down need for ladders and scaffolds with their inherent dangers.

AVAILABLE IN 3 SIZES: 9", 14", 18".

Made with *High Pile Lambswool*. Works with ALL PAINTS Rustproof aluminum frame; brass bearings; patented "Flip Lock." Equipped with long 4 ft. handle (longer pole easily attached).



MAIL NOW

THE AMERICAN PROD. CO., 3306 Edson Ave., New York 69
Please send me illustrated literature, price list, and discounts.
Name _____
Company _____
Street _____
City _____ Zone _____ State _____

For more details circle NED-4604 on enclosed inquiry slip

COULD THIS BE THE HOME FOR YOUR

New Relay?
Transformer?
Choke Coil?

Ideally suited for use where space is at a premium, this standard Hermaseal unit meets Mil-T-27 and JAN specifications, and has many possible applications.

DETAILS

1" x 1" can, depth variable to your requirements.

Supplied with cover pierced for individual terminals, or pierced and embossed for a .600 O.D. sealed header with up to eight terminals (as shown). Equipped with mounting studs, if desired.

Furnished with either dry air fill or vacuum-pumped and pressure-filled with dry nitrogen.

STILL DOESN'T SUIT YOU?

Tell us what you *do* need; perhaps one of our other standard units will fill the bill. Or, we'll be glad to design a special unit for you (as we've done for many others.) Write today for our new catalog and quotes.

Hermaseal

THE HERMASEAL CO., Inc.
Elkhart 20, Indiana

For more details circle **NED-4605** on enclosed inquiry slip

for • SPRAYING • WASHING • RINSING • COOLING • AIR CONDITIONING

Get the most out of your Spraying Equipment with minimum power . . . with efficient spraying.

Use Yarway Nozzles. No internal vanes or other restrictions to clog or hinder flow.

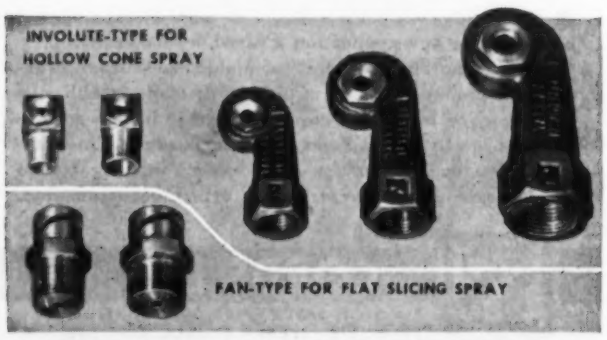
Wide range of standard sizes and capacities. Cast or machined from solid bar stock.

Thousands in use. Write for Bulletin N-616.

YARWAY

SPRAY NOZZLES

YARNALL-WARING COMPANY
131 Mermaid Avenue, Philadelphia 18, Pa.



For more details circle **NED-4606** on enclosed inquiry slip

MOVE stubborn materials with TABOR PNEUMATIC VIBRATORS

Save damage to bins, chutes and hoppers. Save man-hours spent in banging, poking and rodding. *Reliable, durable* Tabor Vibrators keep all types of granular materials from arching and plugging—keep production on its free-flowing way. Tabor means *reliable.* Unique porting insures *instant, full-power start* and rapid powerful blows. Tabor means *durable.* Self-oiling at each stroke. Drop-forged, non-distorting body. Hardened steel pistons, precision-lapped to close cylinder tolerance. Tabor means long-life *quality,* and there's no substitute for that. Your inquiries are invited.

THE TABOR MANUFACTURING CO.
6227 TACONY STREET, PHILADELPHIA 35, PA.

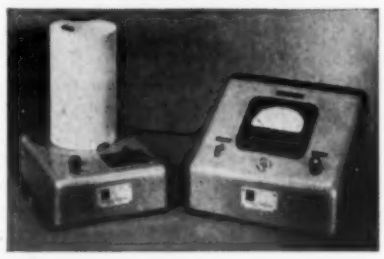
For more details circle **NED-4607** on enclosed inquiry slip

VOLTMETER
with ranges from 1 to 1000 v dc

Accurate measurement of alternating and direct current volts and millivolts and ohms and megohms is possible with the model R voltmeter, made with direct current ranges from 1 to 1000 v full scale. The following auxiliary functions are included in the instrument's design: distended scales for reading small percentage changes in direct current voltages; direct current ranges from 1 to 1000 mv full scale; alternating current ranges from 1 mv to 1000 v full scale; self-contained standard cell for instant check of voltmeter calibration; ohm ranges from times 1 to times 10^6; distended ohm ranges read on bottom half of ohms full scale; direct current amplifier for driving of one milliampere recorder, with gain of 200 and frequency range from 0 to 100 kc. Made by **Southwestern Industrial Electronics Co.,** Dept. NE-P2, 2831 Post Oak Rd., Houston 19, Tex.

For more details circle **NED-4608** on enclosed inquiry slip

GAMMOMETER
measures large sample radiation



Radioactive - sensitive element of model AH-2 gammometer is Ohmart cell in which radioactive energy is converted directly into electrical energy with only 1 vacuum tube and without need for high voltage power supply. Samples can be placed in a well within the cell, minimizing geometry errors and permitting measurement of larger quantities of activity than when slides must be prepared. Instrument is direct reading in microcuries and is suited to applications where large liquid or solid samples must be utilized for accurate radiation measurement. Sample well measures 2⅜ in. diameter and 5 in. deep. Ranges are 1, 10, 100 and 1000 microcuries full scale. Calibration is in terms of radium (standard), cobalt-60 or iodine-131. Precision is better than plus or minus 1 per cent of full scale. For measurement of ambient field intensity, gammometer is available calibrated in milliroentgen per hour. Made by **Ohmart Corp.,** 2349 Ferguson Rd., Cincinnati 38, O.

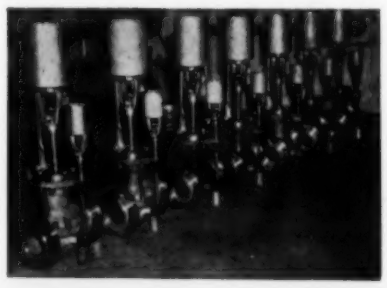
For more details circle **NED-4609** on enclosed inquiry slip

HIGH-STRENGTH GLUE
binds abrasives to polishing wheels

Binding of abrasive to surface of metal-polishing wheels is facilitated with improved high-strength Belgrade glue, a hide type supplied in ground form and packaged in barrels and 100-lb boxes. Glue has high water absorption qualities which result in maximum quantities of prepared glue from each pound of the dry form. It has the proper viscosity, flexibility and strength required to prevent abrasive from tearing loose while wheel is in operation. Glue is obtainable from **Hanson-Van Winkle-Munning Co.,** W. Church St., Matawan, N. J.

For more details circle **NED-4610** on enclosed inquiry slip

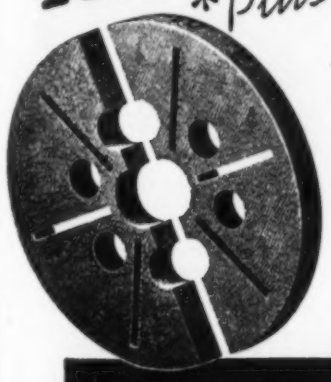
CONTROL VALVES
for temperature, pressure extremes



Such diverse materials as liquid nitrogen at a temperature of −325° F and a pressure up to 3000 psi, red fuming nitric acid at room temperature and superheated steam up to 1000° F can be handled by model 1570 and 1580 control valves. Made for handling variety of materials at extremes of temperature and pressure, single seated valves feature an external self-balancing arrangement which provides ease of operation at extreme pressure differentials and still retains positive bubble-tight shutoff. Also incorporated are single seat, split body construction, Teflon seat seals and radiation fins for extreme temperatures. Valves can be serviced without removal from line. Lower half of valve body can be quickly replaced without special tools. Photo shows model 1570 with electropneumatic operator for on-off service. Model 1580 has Domotor operator for throttling service. Made by **Annin Co.,** 3502 Union Pacific Ave., Los Angeles 23, Calif.

For more details circle **NED-4611** on enclosed inquiry slip

P.V.* APPROVAL
**Plus Value*



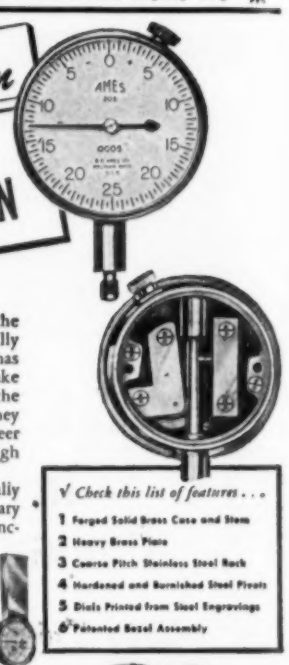
Western Felt users over a long period of years have placed their stamp of approval on a long list of its products. They know from experience the "plus value" in every Western Felt component part. Highest precision in its processing and cutting produces a uniformity that minimizes rejections—prevents failure of the finished product from felt causes. They are available from wool softness to rock hardness—never lose shape—do not ravel or fray—resist oil, water, age—are resilient, flexible, compressible—may be cut to close tolerances.

WESTERN Felt WORKS
4035-4117 Ogden Ave., Chicago 23, Illinois
Branch Offices in Principal Cities
Manufacturers and Cutters of Wool Felts

Acadia Synthetic Products Division, WESTERN FELT WORKS, Processors of Synthetic Rubber — Sheets, Extrusions, Molded Parts.

For more details circle **NED-4612** on enclosed inquiry slip

Modern Design **SPEEDS PRODUCTION**



● Ames micrometer dial indicators are the most modern available today — and naturally so because Ames policy for over 50 years has been continually to improve design, to take advantage of new materials and to utilize the most advanced manufacturing methods. They are a real aid to the quality control engineer who is trying to keep pace with today's high production schedules.

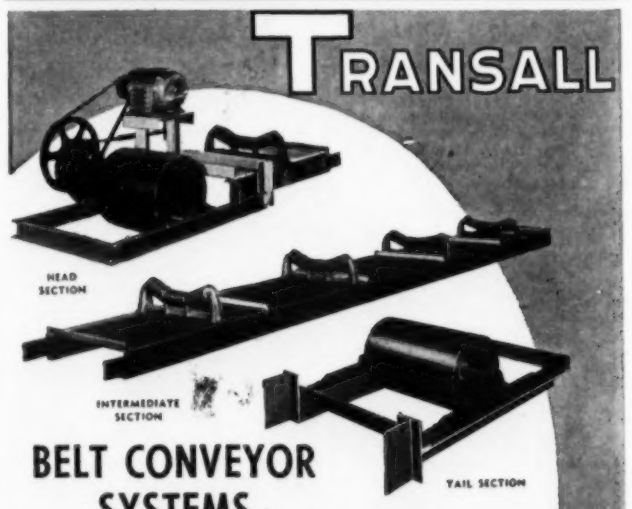
Because Ames Indicators are functionally designed, they have fewer parts than ordinary indicators. Construction is simple with functional parts being larger and more rugged and adequately supported. Operational friction is at a minimum. Thus, Ames Indicators combine extreme sensitivity and accuracy with the ability and endurance *to stay right on the job longer.*

√ *Check this list of features . . .*
1 Forged Solid Brass Case and Stem
2 Heavy Brass Plate
3 Coarse Pitch Stainless Steel Rack
4 Hardened and Burnished Steel Pivots
5 Dials Printed from Steel Engravings
6 Patented Bezel Assembly

Representatives in principal cities **B. C. AMES CO.** 34 Ames Street, Waltham 54, Mass.
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

For more details circle **NED-4613** on enclosed inquiry slip

TRANSALL



BELT CONVEYOR SYSTEMS

PRE-LUBRICATED

Lower initial cost because they are *pre-engineered* . . . lower upkeep because TRANSALL Idler Bearings are *pre-lubricated* for life. TRANSALL Sectional Conveyors are transportable, easy to lengthen, shorten, move. Investigate these and other advantages and you'll decide to "get a load off your mind with TRANSALL!" Write TRANSALL, Inc., 120 N. 11th Street, Birmingham 4, Alabama.

SAVE MONEY

For more details circle **NED-4614** on enclosed inquiry slip

insist on "buried" integrity in your products

In the durable goods field most of the products are composed of many component parts. Acadia Synthetic Rubbers are contributing importantly to the superiority of thousands upon thousands of these products on land, sea, and in the air—from battleships to tiny instruments. For years manufacturers in hundreds of industries have found by experience that, with Acadia Synthetic Rubber parts in their products, they will never have trouble from that source. Acadia is a "buried" but vital component for products of highest integrity. Insist upon it!

for every synthetic rubber requirement

sheets • tubing • strips • channel • washers
seals • bellows • gaskets • rings
extrusions • cut parts

Resists oil, age, wear, heat, light

ACADIA Synthetic PRODUCTS

Processors of Synthetic Rubber and Plastics • Sheets • Extrusions Molded Parts

DIVISION WESTERN FELT WORKS
4035-4117 Ogden Avenue, Chicago 23, Illinois

For more details circle NED-4615 on enclosed inquiry slip

New Flexible Sealing T-J AIR CYLINDER

Designed with revolutionary application of Super-Cushion
It's *sealed with pressure*—insures positive cushion action combined with automatic valving action for fast return stroke . . . eliminates binding and sticking . . . operates with *low friction, minimum wear,* and *added power* due to higher efficiency. Many more plus features! Wide range of styles and capacities. Write for bulletin 252. The Tomkins-Johnson Co., Jackson, Mich.

36 YEARS' EXPERIENCE T-J
TOMKINS-JOHNSON
VALVES · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

For more details circle NED-4616 on enclosed inquiry slip

Speed Production...Save Money with WEBBER

TRADE MARK REGISTERED

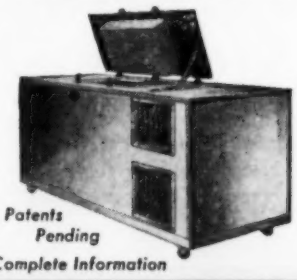
INDUSTRIAL FREEZERS

Webber Industrial Freezers can save you time and money on the following operations:

- In the Shrink Fit of Metals for Production and Assembly
- For Stabilization of Metals for Tool and Fixture Manufacturers
- For Metal Hardening—For greater tool life and accuracy
- For Storage and Testing of Materials at Extremely Low Temperatures
- For Chemical Curing, Ageing and Processing
- Eliminates Dry Ice Applications and Overhead
- Amortizes itself in less than one year
- Performs Low Temperature Services with Greater Dependability and Accuracy to Temperatures as Low as —165° below zero.

Cut your operating costs, Improve Quality and Production, Save Valuable Tools, and Improve Testing Methods with Webber Industrial Freezers

36 Standard Models . . .
or Built to Your Specifications . . . at No Additional Cost.
A Freezer for Every Need
REPRESENTATIVES IN MOST CITIES



Patents Pending

Write for More Complete Information

INDUSTRIAL FREEZER DIVISION
WEBBER APPLIANCE CO., INC.
A-2740 MADISON AVENUE • INDIANAPOLIS 3, INDIANA

For more details circle NED-4617 on enclosed inquiry slip

FLOATING ANCHOR UNIT
radial play allows nut alignment

Radial movement of 1/16-in. between nut and anchoring portion in this lightweight Kaylock self-locking floating anchor nut assembly facilitates alignment of nut to attaching bolt. Nuts conform with Government lock nut specifications AN-N-10a and AN-N-5b. Cadmium plated, all spring steel construction allows their use to 550° F. Upper threads are made elliptical and highly resilient so that all threads carry actual load. Another feature is that nut bears directly against its mounting surface, providing high bearing qualities. All units are provided with permanent silicone lubricant. Made by **Kaynar Mfg. Co.,** Kaylock Div., Engineering Dept. D-50, 820-A E. Sixteenth St., Los Angeles 21, Calif.

For more details circle NED-4618 on enclosed inquiry slip

HEAVY DUTY CASTER
for high speed trailer uses

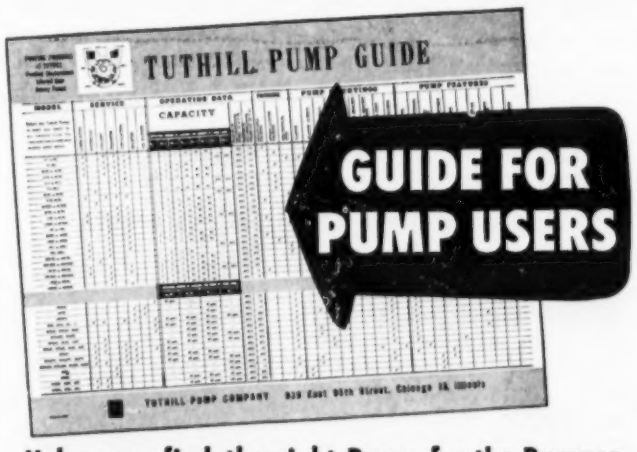
Designed to stand up under the long and fast hauls now required of industrial trailers, these heavy duty high speed casters are rated 2000-lb capacity at 8 mph for trailer train operation. Casters are available with 10-in. diameter metal or rubber wheels in both swivel and rigid models and 11-in. wheels in the rigid type. Wheels are high-tensile cast iron and have tapered roller bearings. Labyrinth grease seals are used on all models. Made by **Lansing Co.,** Dept. DEN, 603 N. Cedar St., Lansing 3, Mich.

For more details circle NED-4619 on enclosed inquiry slip

ELECTRONIC WATTMETER
measures power accurately

Having full-scale accuracy within 2 per cent, model 109 electronic wattmeter employs an amplifier to drive the potential coil of the dynamometer wattmeter. Input impedance is 500,000 ohms, and sensitivity permits measurement of low-level circuits or those with small test potential. Frequency response is 20 to 3000 cycles per second. Ranges of 300, 100, 30, 10, 3, 1, 0.3, 0.1 and 0.03 watts are provided. Maximum permissible current is 1 ampere, with external shunts available for measuring 3, 10 and 30 ampere circuits. Made by **Keithley Instruments,** 3870 Carnegie Ave., Cleveland 15, O.

For more details circle NED-4620 on enclosed inquiry slip



Helps you find the right Pump for the Purpose

As a practical help to pump users, Tuthill has developed a simple, easy-to-use reference sheet which gives all the facts you need to select the pump best suited for your requirements. This data includes types of service, pump models, capacities, pressures, speeds, packing, mountings—all features to give you the necessary details to select the exact pump for your purpose.

TUTHILL PUMPS FOR THE PURPOSE — 25th Anniversary

Write for your copy of this helpful guide today.

TUTHILL PUMP COMPANY
939 East 95th Street • Chicago 19, Illinois

For more details circle NED-4621 on enclosed inquiry slip

Bendix-Friez THERMISTORS

(NEGATIVE TEMPERATURE CO-EFFICIENT CERAMIC RESISTORS)

• These temperature responsive resistors are useful as temperature measuring elements and as liquid level sensors; they are especially well suited to compensation where the circuit constants must be maintained irrespective of temperature changes. Since they are a fired ceramic, they are stable under practically all conditions and respond only to temperature changes.

Typical application in capsule form for temperature sensing of hydraulic oil.

Many other values can be obtained from standard diameter material. Because the thermistors are made in our own plant, under extremely careful control, special compositions, shapes, and resistance values, hermetically sealed or otherwise protected, can be made in any quantities to suit your individual requirements.

We invite your Inquiries Write Dept. I

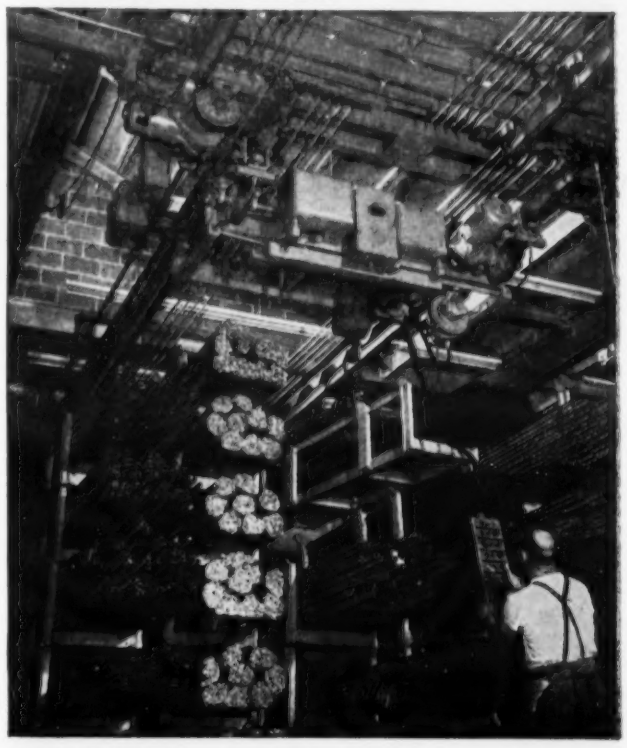
BENDIX-FRIEZ STANDARD ROD TYPES

Size (inches)	@ +30°C.	@ 0°C.	@ —30°C.
.140 x ¾	45 ohms	88 ohms	193 ohms
.040 x 1.5	14,000 ohms	29,946 ohms	74,676 ohms
.018 x 1.5	40,000 ohms	94,040 ohms	262,400 ohms

FRIEZ INSTRUMENT DIVISION of Bendix Aviation Corporation
1324 Taylor Avenue • Baltimore 4, Maryland
Export Sales: Bendix International Division, 72 Fifth Ave., N.Y. 11, N.Y.

For more details circle NED-4622 on enclosed inquiry slip

NOW UNLOAD CARS AND TRUCKS IN ONE TENTH FORMER TIME



MANPOWER hard to find? Do men and machines stand idle waiting for materials? Is the handling of heavy and slippery shapes hazardous, slow and costly? Then listen to the experience of this recent purchaser of Louden Overhead Handling equipment.

"With the Louden equipment shown in the photograph, we now unload incoming steel on railroad cars and trucks in 1/10th the time formerly required. For example, 120,000 pounds of steel bars tied in 3-ton bundles were unloaded, sparked, graded and moved into our warehouse in 1 ¾ hours. With our former handling methods, production was handicapped, inspectors could not work continuously, classifications were confused, and warehouse labor costs were excessive. Now just **one** man using the crane and hoist control shown does this entire handling job easily and safely."

WRITE FOR THIS FREE BOOK
Case histories telling how Louden Monorail Systems have saved time and money for widely different kinds of industries are described and pictured in a new, illustrated, 56-page book called, "Economical Material Handling".

THE LOUDEN MACHINERY COMPANY
5125 S. Superior Ave., Fairfield, Iowa

Louden

OVERHEAD MATERIAL HANDLING

For more details circle NED-4623 on enclosed inquiry slip

No Miracle, Just *Sound Engineering*

Noise reduced 50%* inside a

BURGESS-MANNING

Acousti-Booth

In the hushed interior of this roomy, airy Acousti-Booth you hear easily while telephoning. Walls of thick sound-absorbing material and patented construction reduce the loudness of noise by 50%.

Pleasing in appearance . . . simple to install.

Model 601

Model 210

Write for Bulletin 103A

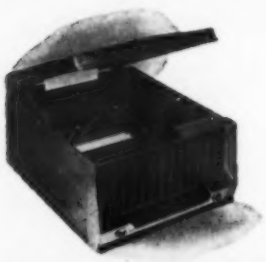
* Results of studies by a prominent research group

BURGESS-MANNING COMPANY

Architectural Products Division

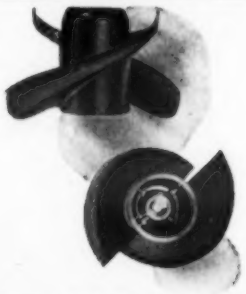
5970-C Northwest Highway, Chicago 31, Illinois

For more details circle NED-4624 on enclosed inquiry slip



Beauty of mahogany mottle finish, fine details, scratch-resistance, light weight and strength at reasonable cost feature this cabinet for Philco radio-phono combination. It's BAKELITE BM-780 General-Purpose Phenolic.

Molded by The General Industries Co., Elyria, Ohio, and American Insulator Corp., New Freedom, Pa.



Strength and stability! This impeller for Sears, Roebuck's Kenmore Dishwasher is made of BAKELITE Water-Resistant, Improved-Impact Phenolic BM-13080. It stands up under whirling scalding water, blasts of hot air, attack by soap and detergents.

Molded by Martindell Molding Co., Trenton, N. J.

Heat resistance, good electrical properties combine in this magneto distributor plate for heavy-duty automotive equipment. It's BAKELITE BM-18425 General-Purpose Phenolic with improved electrical insulation qualities.

Made for American Bosch Corp. by Specialty Insulation Mfg. Co., Hoosick Falls, New York.

Intricate design and electrical resistivity—up to 600 volts AC, 250 volts DC, 10-600 amps.—are two of many features of this I-T-E Circuit Breaker case molded of black BAKELITE General-Purpose Phenolic BM-2498.

Made for I-T-E Circuit Breaker Co., Philadelphia, Pa., by American Insulator Corp., New Freedom, Pa.

Why PHENOLIC PLASTICS get the job!

The wide variety of BAKELITE Phenolic Plastics means that you can pick the *right* combination of properties to suit your particular purpose.

And with *all* BAKELITE Phenolic Plastics, you'll get the plus-factors of strength, beauty, economy, ease of production. Their resistance to chemicals and moisture, good electrical properties, long service life, and light weight are added features you can't afford to overlook.

Select the phenolic molding material that's best for your application . . . put it to work for your product. It means improved design, better performance, more saleability! Our Engineers will be glad to help you. Write Dept. DW-21.

BAKELITE
TRADEMARK
PHENOLIC PLASTICS

TRADE MARK

BAKELITE COMPANY

A Division of
Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.
In Canada:
Bakelite Company (Canada) Ltd., Belleville, Ont.

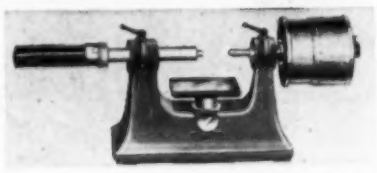
For more details circle NED-4625 on enclosed inquiry slip

WET & DRY VACUUM CLEANER equipped with 55-gallon tank

The 55-gallon tank of this wet and dry vacuuming machine will hold 5 bushels of dry dirt or 40 gallons of recovered liquid. Entire unit is mounted on a heavy steel dolly fitted with hinged handle and three ball baring casters. A 2-in. quick-opening gate valve permits liquid contents to be emptied into drain or gutter. Vacuum hose is 20 ft long and made of wire reinforced, oil - resistant synthetic rubber. Attachments enable machine to take up dirty scrubbing solutions, dry flooded areas, recover coolant and clean coolant sump tanks, as well as clean stock bins, overhead pipes and beams, ceilings and other locations. Either liquid or dry dirt are picked up without adjustment or change of parts. Made by **Hild Floor Machine Co.**, Dept. NE, 740 W. Washington Blvd., Chicago 6, Ill.

For more details circle NED-4626 on enclosed inquiry slip

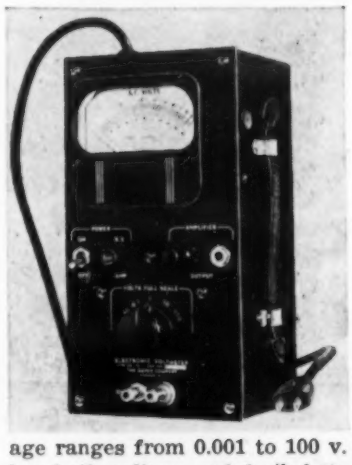
PRESSURE CONTROLLED MICROMETER bench type has 0 to 4 in. capacity



Bench type Pitter pressure controlled micrometer has 0 to 4 in. capacity, plus adjustable table which is square in both directions within precise limits. Micrometer head is calibrated directly in 0.0001-in. increments on large drum type thimble. Pressure control head can be instantly changed from 1 to 2½ lb pressure which is standard specified by National Bureau of Standards. Instrument is offered for measuring gages to extremely fine limits. Made by **O-Vee Gauge Co.**, Dept. NED, 2516 W. Vernon Ave., Los Angeles 8, Calif.

For more details circle NED-4627 on enclosed inquiry slip

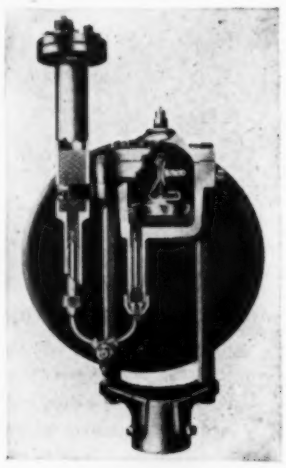
ELECTRONIC VOLTMETER for laboratory and production use



Self-contained and fully portable, type 170-A improved electronic voltmeter features separate amplifier and power supply sections for ease of servicing. Amplifier is shock-mounted, and both units are shielded from each other and from external fields. Any standard vacuum tube can be used. Unit will measure accurately sinusoidal alternating current over a frequency range of 10 to 250,000 cycles and voltage ranges from 0.001 to 100 v. Large easy-to-read meter has both voltage and decibel ranges. Made by **Daven Co.**, Dept. NED, 191 Central Ave., Newark 4, N. J.

For more details circle NED-4628 on enclosed inquiry slip

FLOW METER has replaceable stainless seats



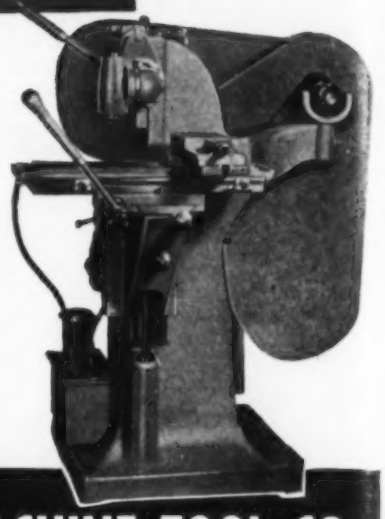
Among improvements made in design of type 27 recording flow meter is a factory-lubricated pressure-seal bearing which is leakproof at working pressures and requires no mechanical adjustments. Bearing body and associated parts are interchangeable, as are plastic check floats, kept clean by complete submersion in mercury. A stainless steel ball plug and seat prevent clogging and locking. U-bend has improved metal-to-metal compression seals tested at 10,000 psi against mercury loss. Damping plug is calibrated to simplify damping adjustments. Drain port located at the low point in the U-bend allows mercury to be completely emptied without spillage. New type of stainless steel ball-chain, which transmits straight-line motion of float to the recording pen assembly, eliminates friction and errors of angularity. Made by **Foxboro Co.**, 134 Neponset Ave., Foxboro, Mass.

For more details circle NED-4629 on enclosed inquiry slip

U.S. No. 1 MILLING MACHINE

The No. 1 Value in all purpose high production hand-feed milling machines.

Send for information on power feeds universal milling head and other efficient attachments.



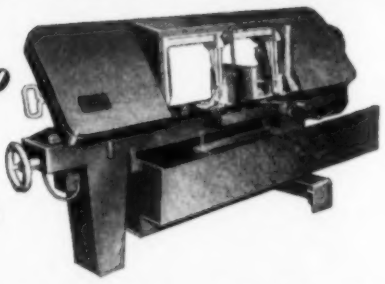
U. S. MACHINE TOOL CO.

A Division of the U. S. Burke-Machine Tool Co.
Brotherton Road 2 Cincinnati 27, Ohio

For more details circle NED-4630 on enclosed inquiry slip

GET ACCURACY that SAVES STOCK . . .

. . . get *Kalamazoo* METAL CUTTING BAND SAWS



Here's *real* precision metal sawing that cuts waste to a minimum, saves hard-to-get stock. *Kalamazoo* Band Saws cut bars, rounds, flats, angles, odd shapes to within a few thousandths of size. What's more, there's an absolute minimum of kerf and *no* burr.

You can get Kalamazoo Metal Cutting Band Saws in three sizes . . . for cutting 6" to 12" rounds. 6" x 10" to 12" x 20" flats. Each model can be had with coolant system for continuous cutting. Each is available with casters for complete portability. Write for details on the many exclusive *Kalamazoo* features that spell *better cutting at lowest cost to you.*

MACHINE TOOL DIVISION

Kalamazoo TANK and SILO CO.

512 HARRISON ST., KALAMAZOO, MICHIGAN

For more details circle NED-4631 on enclosed inquiry slip

Never Before!

. . . SO MUCH POWER PER POUND

MEET the new Rotor Vertical Air Grinders! Never before have you had so much power in vertical air grinders . . . for such light weight! They're well balanced . . . easy on the operator. Here are *new* features to speed up your metal removal. *Write today for Bulletin No. 40.*

AIR O'TOOL

THE ROTOR TOOL CO.
CLEVELAND, OHIO

For more details circle NED-4632 on enclosed inquiry slip

New Spee-Dee Pays for itself in 3 months!

● Anyone in your office can quickly make accurate black-on-white or blue-on-white prints up to 24" x 36", from translucent originals, at less than 2¢ per sq. ft. Makes photocopies too. Just plug in. Uses diazo (moist or ammonia dry) process. $155.81 including initial supply of paper and developing powder. Printer only, $149.81. Shipping weight, 85 lbs. *Order the Spee-Dee on 10-days free trial, or write for full facts.* 12" x 18" and 18" x 24" sizes also available from $55.12 up.

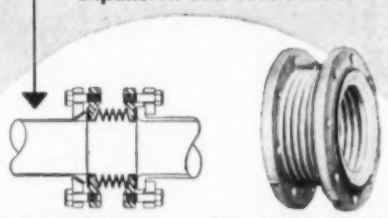
10-DAY FREE TRIAL

PECK & HARVEY
Mfrs. of Whiteprint, Blueprint & Photocopy Equipment
5733 NORTH WESTERN AVE., CHICAGO 45, ILLINOIS

For more details circle NED-4633 on enclosed inquiry slip

CHEMISEAL MADE OF TEFLON **EXPANSION JOINTS**

1 Chemical and contamination proof.
2 Correct mis-alignment.
3 Absorb vibration and pipe-line expansion and contraction.



Chemiseal Expansion Joints, fabricated from Teflon*, will handle all fluids that glass or other chemical-resistant piping can handle, without corrosion, contamination, danger of leaking or bursting. Designed for 25 lb. pressure and temperatures from —110°F. to 500°F. Ask for catalog No. 212.

UNITED STATES GASKET COMPANY
Fluorocarbon Products Division
CAMDEN 1, NEW JERSEY
*du Pont's trademark for its tetrafluoroethylene resin

FABRICATORS OF "TEFLON", "KEL-F" AND OTHER FLUOROCARBON PLASTICS

For more details circle NED-4634 on enclosed inquiry slip

THIS SAFETY TREAD IS CAST TO LAST

it's FERALUN

A special cast iron matrix with a diamond-hard abrasive imbedded in the walking surface. That's the Feralun secret of safety. The abrasive, *not* the scoring, provides secure footing—wet, oily or dry.

That's why you will find Feralun underfoot, wherever traffic is heaviest . . . in subways, railway cars, buses, factories, office and public buildings, even on battleships. This extra-safe, extra-durable flooring will last the life of the structure.

Don't slip up on safety! Look into the facts and figures on Feralun. Write for Bulletin 4k Am today. AB 109A

AMERICAN ABRASIVE Safety Floorings

AMERICAN ABRASIVE METALS CO., 460 COIT ST., IRVINGTON 11, N. J.

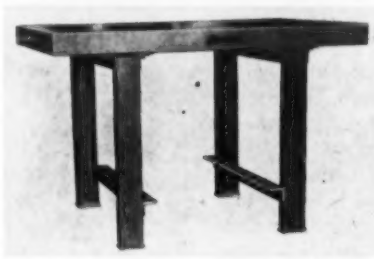
For more details circle NED-4635 on enclosed inquiry slip

ELECTRIC DEHUMIDIFIER
for up to 10,000 cu ft of space

Completely restyled, model 750 portable electric dehumidifier is attractive in appearance. Added features include an automatic overflow drain cock and permanent drain hose connection. Retained is In-A-Drawer moisture container which can be emptied easily and carried without spilling. For permanent installation, unit can be placed over or near drain with hose running to drain. Retail price is $149.95. Made by **Fresh'nd-Aire Co.**, Dept. NED, 221 N. LaSalle St., Chicago 1, Ill.

For more details circle NED-4636 on enclosed inquiry slip

UTILITY BENCH
has 24 x 36-in. cast-iron top



This shop utility bench consists of heavily-ribbed 24 x 36-in. cast-iron top supported by four braced steel legs. It is lightweight, extremely strong and stands 36 in. high. A 30-in. high model is also available for use as nailing table. Made by **Challenge Machinery Co.**, Dept. NED, 1943 Thomas St., Grand Haven, Mich.

For more details circle NED-4637 on enclosed inquiry slip

SAFETY RELIEF VALVE
for hot water boilers, tanks, heaters

Type F-51 safety relief valve for hot water space heating boilers, tanks and heaters is tested and approved by National Board of Pressure Vessel Inspectors and bears ASME approval stamp. It is offered in pressure settings from 30 to 125 lb, with corresponding Btu ratings at various pressure settings. With the Cash-Acme unit, a valve having a greater relieving capacity in Btu's per hour than the particular boiler can generate can be installed. Capacity is sufficient to relieve pressure due to both thermal expansion of water and steam caused by failure of firing device to shut off. All-bronze valve is of high lift design and has stainless steel spring and silicone seat disk. Made by **A. W. Cash Valve Mfg. Corp.**, 6624 E. Wabash Ave., Decatur 60, Ill.

For more details circle NED-4638 on enclosed inquiry slip

How to Buy the Best Gloves for the Job... At Lowest Cost!

N-54 All milled DuPont neoprene Stanzoil, heavyweight. Non-slip fingers and palm. Curved or straight finger styles.

PIONEER Stanzoils®

Smart buyers find it doesn't pay to buy one kind of glove for several different jobs, even if it's cheap. What pays is good protection for workers' hands PLUS gloves that make work easier and faster. Fit gloves efficiently to the job for more production—and new PIONEER catalog shows you how. *Unbiased advice, for Stanzoils include all kinds of liquidtight gloves:* all-neoprene, neoprene or plastic coated, 32 styles, weights, sizes, colors. You profit from scientific glove selection—write for this helpful catalog today!

Industrial Glove Division
The PIONEER Rubber Company
634 Tiffin Road, Willard, Ohio • Los Angeles

OVER 30 Years OF QUALITY GLOVE MAKING

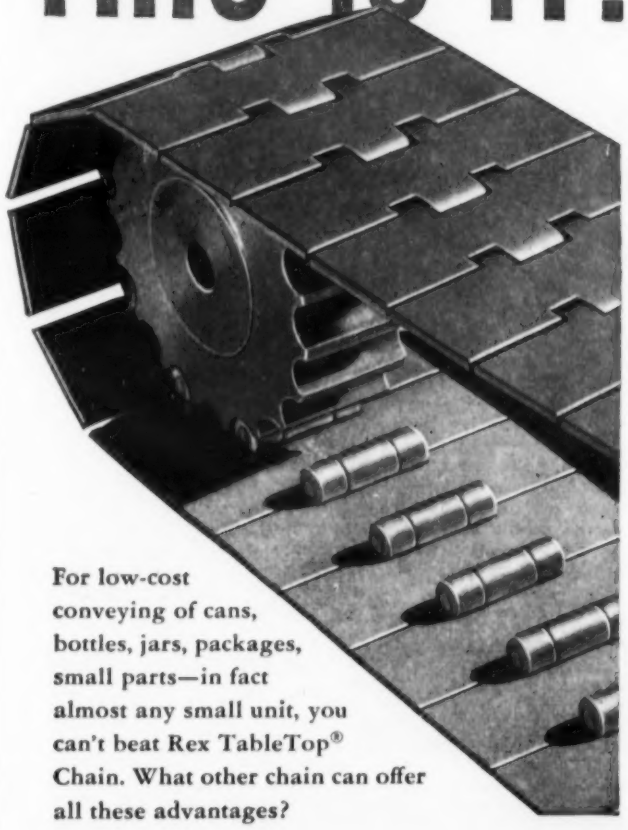
For more details circle NED-4639 on enclosed inquiry slip

Here is one of 100 lifting and transporting jobs made easy with a CANTON Portable Floor Crane. Loads up to three tons can be moved anywhere in your shop by one man—safely, efficiently and economically. Made of light-weight tubular steel in eight sizes. Bulletin N-52 gives details.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

For more details circle NED-4640 on enclosed inquiry slip

THIS IS IT!



For low-cost conveying of cans, bottles, jars, packages, small parts—in fact almost any small unit, you can't beat Rex TableTop® Chain. What other chain can offer all these advantages?

1. Simple as a door hinge—only two parts—link and pin.
2. Smooth transfer—short opening between links—will not catch and trip containers—slides freely under blocked containers.
3. Easy to clean—no pockets to catch foreign matter and encourage bacteria.
4. Easy to couple and detach—fits into existing tracks.
5. Unique sprocket and hinge joint mean wider bearing area . . . longer chain life.

Compare TableTop with other types of conveying methods. We feel sure you'll agree that TableTop is the low-cost, long-life, efficient way to handle it. Our bulletin 51-60 contains all the details on this great chain. Send for it today. Chain Belt Company, 4686 West Greenfield Ave., Milwaukee 1, Wisconsin.

CHAIN BELT REX COMPANY ®

Chain Belt COMPANY OF MILWAUKEE

Atlanta • Baltimore • Birmingham • Boston • Buffalo • Chicago Cincinnati • Cleveland • Dallas • Denver • Detroit • El Paso • Houston Indianapolis • Jacksonville • Kansas City • Los Angeles • Louisville Midland, Texas • Milwaukee • Minneapolis • New York • Philadelphia Pittsburgh • Portland, Oregon • Springfield, Mass. • St. Louis Salt Lake City • San Francisco • Seattle • Tulsa • Worcester

For more details circle NED-4641 on enclosed inquiry slip

Handle Drums or Barrels--

The HARD WAY or LABOR SAVING "One-Man" WAY?

SABIN BARREL TRUCK

With but little effort, ONE MAN picks up and moves container loads weighing up to 800 pounds. Operation is simple. You run truck up to container, hook on at top and pull back on handle and load is picked up automatically. Third Wheel Feature ensures better balance and added safety in moving load.

WRITE FOR BULLETIN NO. 48-A

THE SABIN MACHINE CO.
6536 Carnegie Avenue
Cleveland 3, Ohio

ALSO TOTE PAN, BOX, CARBOY, KEG TRUCKS!

For more details circle NED-4642 on enclosed inquiry slip

Chem-Board Tote Boxes

HELP BUILD AIRCRAFT

Many plants building the planes needed to make the nation strong keep materials, parts and sub-assemblies flowing to production lines in thousands of Convoy Chem-Board Tote Boxes. The nesting boxes illustrated are stored in minimum space while awaiting new loads.

Chem-Board is made of corrugated fibre-board, chemically impregnated by Convoy's exclusive process. It is flint hard and rock strong. It is not weakened by moisture. It is impervious to machine oils. Convoy Tote Boxes cost and weigh 50% to 60% less than steel.

The lightness, toughness and economy of Chem-Board Tote Boxes are unmatched. Tell us the style you use . . . we'll send a free production sample from the next run for you to test. As a guide for present and future availability, our current production capacity is reserved for the unprecedented demands from old customers and "DO" orders. Orders rated DO-MRO are acceptable. Write today.

Standard and Custom-made
Nesting — Stacking — Vertical
CHEM-BOARD TOTE BOXES

CONVOY, INC.
P.O. Station B, Box 216-N
CANTON 6, OHIO

For more details circle NED-4643 on enclosed inquiry slip

The KING of STROKE and REVOLUTION COUNTERS

BETTER beyond comparison
say thousands of users

Used by the thousands in Auto and Aircraft Factories, Metal Working, Die Casting, Plastic Molding and Stamping Plants.

Rugged as an army tank, yet operate smooth as a watch.
Precision built of life-tested Materials.
Tamperproof Reset.
Streamlined—All steel housing.
Complete range of models.

PRODUCTION INSTRUMENT CO.
700-12 W. Jackson Blvd., Chicago 6, Ill.
Please send Catalog of Silver King Counters and Brief Catalog MODERN Counting Devices.

Company _____
Name _____ Title _____
Street _____ City _____ Zone ____ State _____
SK-11

For more details circle NED-4644 on enclosed inquiry slip

AUTOMATIC ICE MAKER
produces small clear fragments

Up to 300 lb per day of small clear fragments of ice can be produced automatically with this model DER-2 York-FlakIce ice maker. Machine operates wherever water and electricity are available. Pure ice flakes produced are slightly curve-shaped, provide fast cooling of liquids, will not crush or bruise foodstuffs or other delicate products, and have retarded melting action because of shingling action. Unit is air cooled and can be plugged into electrical socket. Safe, efficient Freon 22 is used as the refrigerant. Made by **York Corp.**, 111 Roosevelt Ave., York, Pa.

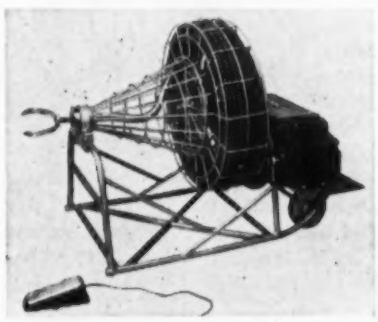
For more details circle NED-4645 on enclosed inquiry slip

LIGHT DRILL PRESSES
speeds range from 600 to 5000 rpm

Redesigned line of 15-in. light drill presses available in bench, floor and multispindle models have ½-in. capacity in cast iron and will drill to center of 15-in. circle. Both 6-in. or 4¼-in. spindle travel models are offered, the former incorporating calibrated depth gage and micrometer type depth stop. All models feature completely enclosed motor switch housing built into head casting. Steel belt guards are standard. Features such as six-spline, independently mounted spindle pulley and one piece head castings are incorporated. Four speeds ranging from 600 to 5000 rpm are available, and slower speed pulley is also offered. No. 6A Jacobs chuck 0 to ½ in. or No. 1 Morse Taper spindle are optional equipment. Made by **Kearney & Trecker Corp.**, Walker-Turner Div., 129 Berkman St., Plainfield, N. J.

For more details circle NED-4646 on enclosed inquiry slip

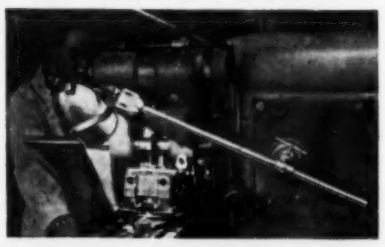
PIPE & DRAIN CLEANER
cleans 3 to 10-in. diameter lines



Clogged sewers can be restored to normal flow without digging up lawns, floors or walks with Root Master sewer cleaner which can cut out stubborn roots and remove dirt and scale from 3 to 10-in. diameter lateral lines. Either a ¼, ⅓ or ½-hp capacitor type motor or a 1½-hp gasoline engine is used to rotate and feed out the 110 ft of ¾-in. flexible steel cable with any one of four interchangeable steel cutting knives. Feature of unit is the cable saver, a special inner wheel which absorbs excessive torque to prevent kinking and breakage. Frame and cage is all-welded steel construction to reduce weight. Machine folds for storing in car trunk. Made by **O'Brien Mfg. Co.**, 5662 Northwest Highway, Chicago 30, Ill.

For more details circle NED-4647 on enclosed inquiry slip

ADJUSTABLE MACHINE LAMP
throws light directly on work area



A flood of light can be thrown directly on working area with heavy duty machine lamp having flexible joint adjustment in three planes. Only maintenance necessary is occasional replacement of standard 40, 60 or 75-w bulbs. To avoid oil damage, Textolite bearings and an oil resistant cord with supplementary Vinylite insulation are used throughout. Cord is outside of swivels or bearings as further electrical protection. Heavy gage steel reflector, which remains relatively cool, has on-off switch mounted next to adjustment knob. Entire lamp is Underwriters' Laboratories approved. A grounded three-conductor cord which prevents voltage difference between machine and lamp is also available at slight extra cost. Made by **Bretford Mfg., Inc.**, 2850 Commerce St., Franklin Park, Ill.

For more details circle NED-4648 on enclosed inquiry slip

BRUTEX TRACING CLOTH

White... Moisture-Resistant!

This new, white Bruning pencil tracing cloth lets you draw better and faster than ever before, gives you an improved drawing surface with unsurpassed *permanent* translucency for top-notch reproductions.

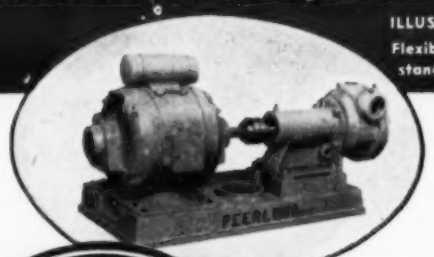
Here are the six reasons Brutex does a better job: 1. The super-velvet matte surface is exactly *right* for pencils of even the harder grades. 2. Translucency is clear and uniform. 3. Repeated erasures do not affect the surface. 4. It's moisture-resistant. 5. Brutex won't discolor or become brittle. 6. All qualities are *permanent!*

Get free booklet from CHARLES BRUNING CO., INC., Department C52 Teterboro, N. J.

BRUNING
Everything for the Engineer and Draftsman

For more details circle NED-4649 on enclosed inquiry slip

FOR PUMPING MODERATE CAPACITIES AGAINST MEDIUM AND HIGH HEADS USE THESE TURBINE VANE TYPE PUMPS



ILLUSTRATED— Flexible-coupled standard pump

PEERLESS TYPES TVE & TVB

PEERLESS PUMPS

Capacity: to 58 gpm.
Heads: to 800 ft.
H.P. Range: to 20 h.p.

ILLUSTRATED— Close-coupled self-priming pump

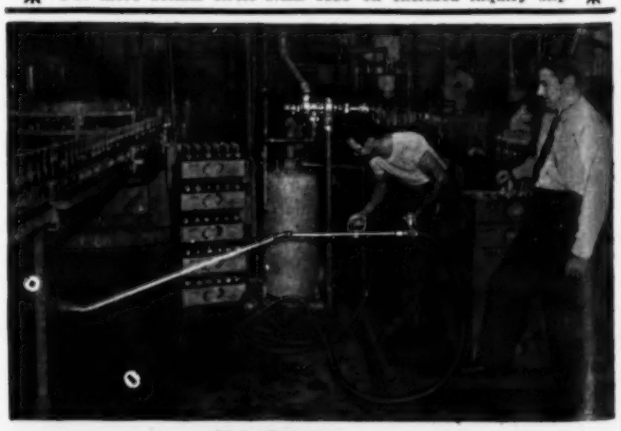
For pumping hot or cold clear or vaporous liquids

Write today for Peerless Pump Bulletin No. B-2205. Profusely illustrated with pictures of both standard and self-priming pump types. Also contains sectional pump drawings, elevations and dimensional data, head-capacity characteristics.

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION

Los Angeles 31, California and Indianapolis 8, Indiana
Offices: New York, Chicago, St. Louis, Atlanta; Dallas, Plainview and Lubbock, Texas; Fresno, Los Angeles; Phoenix; Albuquerque, N. M.; Tulsa

For more details circle NED-4650 on enclosed inquiry slip



ONE MAN NOW does the work of three!

AN ACTUAL CASE . . . it took three men to clean the bottling line equipment and floors at this Southern bottling plant. Now, with the *Sellers Hi-Pressure Jet Cleaner*, it takes only one. Better clean-up is accomplished . . . and no equipment needs to be dismantled.

"We have tried a number of cleaners," said the Plant Manager, "but only the Sellers Hi-Pressure Jet Cleaner does the work. It is doing a wonderful job for us."

Clean-up costs can be reduced as much as 95% with the *Sellers Hi-Pressure Jet Cleaner*. For your own competitive position, you should get the complete facts. *Send for Bulletin C-1.*

SELLERS INJECTOR CORPORATION, 1664 Hamilton Street, Philadelphia 30, Pennsylvania.

For more details circle NED-4651 on enclosed inquiry slip

WEDGE-WIRE
REG. U.S. PAT. OFF.
Kleenslot
SCREEN GUARDS
(PAT. APPLIED FOR)

LONGER LIFE! Particularly adaptable for use at the discharge end of flumes. The guard is built right into the screen to keep the larger lumps of material above the guard bars permitting only the finer particles to pass over the screen. Precision made.

ECONOMY!! They are non-clogging, non-blinding, strong, rigid, uniform and consequently more economical in the long run.

SEND FOR OUR ILLUSTRATED CATALOG

Wedge-Wire CORPORATION
5604 CLARK AVE. CLEVELAND 2, OHIO

For more details circle NED-4652 on enclosed inquiry slip

NEW SKINNER SOLENOID VALVE

EXPLOSION PROOF TYPE X5

THE new Skinner X5 Solenoid Valve is basically the same as the widely accepted and tested V5, but modified to a construction that is Underwriters' approved for Class I, Group D hazardous locations. Small size and lightweight features are retained, and the X5 is low in price because of the many parts which are interchangeable with other Skinner valves. Rating is 10 watts max.; soft, spring loaded seals prevent leakage; internal parts are stainless steel; wide variety of port locations in 1/8" and 1/4" size; most types available for metering; for AC or DC in a wide range of voltages and frequencies; can be mounted in any position; supplied as two-way normally open or closed, three-way normally open, closed or directional flow. *Write today for details!*

SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
135 Belden Ave., Norwalk, Conn.

For more details circle NED-4653 on enclosed inquiry slip

PORTABLE!
PRACTICAL!
PROFITABLE!

Union Special SUSPENDED HEAD
BAG CLOSING MACHINES

Portability, versatility, and simplicity of operation make Union Special Suspended Head Machines ideal for all-around bag closing operations in small plants, and well-suited for utility or stand-by duty in large plants. Users have found that machines can be used to produce neat, strong closures on virtually all types of paper or cloth bags. Initial cost is low; installation is simple and inexpensive. You can hang them up any place and go to work!

Send for this NEW BULLETIN!

Get your copy of Bulletin No. 200 containing illustrations and helpful data charts for the complete Union Special line of bag closing machines. UNION SPECIAL MACHINE CO., 416 N. Franklin St., Chicago 10, Ill.

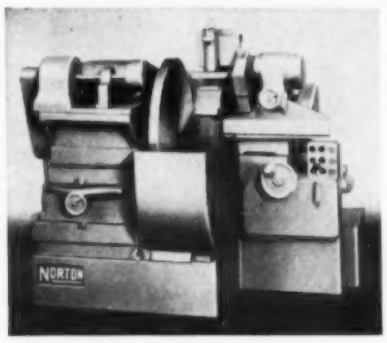
For more details circle NED-4654 on enclosed inquiry slip

MILLING CUTTERS in face and shell end types

Single body is used by universal line of Super-Jack milling cutters for high speed steel or carbide blades, right or left hand rotation or positive or negative angles. Tool can be used for long or short runs on various materials. Shanks of cutter blades are round, and the round holes for the blade and blade locking wedge overlap radially on center in the alloy steel body. This arrangement provides space for up to four times as many blades as the cutter diameter if extremely fine pitch is desired. A groove in the shank of each blade engages a tongue in each blade slot in the body, assuring accurate positioning of the blade shank on center. Made by **McCrosky Tool Corp.**, 1900 S. Main St., Meadville, Pa.

For more details circle NED-4655 on enclosed inquiry slip

GRINDING MACHINES for internal and external grinding of compressor wheels, similar parts



Workhead spindle of this 42-in. grinding machine for jet engine compressor wheels and similar work is designed for mounting of face plates, chucks or other workholding fixtures. Workhead is mounted on a swivel table and has longitudinal and cross adjustments. This table has longitudinal power traverse with automatic reversals from a hydraulic motor unit. To minimize manual tasks in external grinding operations, a timer controlled automatic feed cycle is incorporated, allowing operator to tend two or more machines.

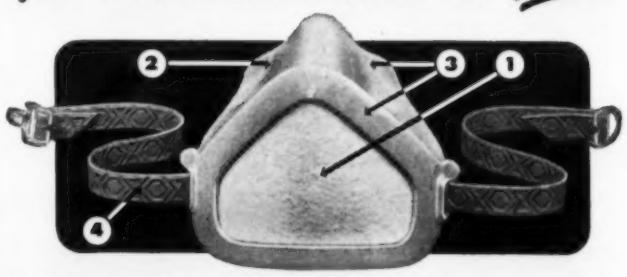
Hand wheel feed mechanism is also provided, as well as an automatic wheel guard type truing device. An internal grinding spindle, mounted on the front of the wheel head, is available at extra cost. Spindles are available for grinding wheels with 7/8 to 7 in. diameters. Unit is quickly positioned along its dovetail slide for grinding, or is quickly retracted to permit external grinding wheel to be used. Made by **Norton Co.**, 200 New Bond St., Worcester 6, Mass.

For more details circle NED-4656 on enclosed inquiry slip

DO YOU KNOW? How to dimension eleven standard types of machine screws is shown clearly on wall chart which is available for mounting in drafting, production and purchasing departments. Free copies are offered by Progressive Mfg. Co., 44 Norwood St., Torrington, Conn.

For more details circle NED-4657 on enclosed inquiry slip

4 Reasons why FLEX-A-FOAM (and only FLEX-A-FOAM) provides Dust Protection your workers will welcome and Wear



1. Pure latex washable filter purifies the air of non-toxic nuisance dusts as small as 1/25000 of an inch — yet it's easier to breathe and talk through than an ordinary pocket handkerchief! Out-wears throw-away type filter as much as 100 to 1.
2. Perfectly contoured for self-adjusting fit to every size and shape of face—designed for wear with spectacles or goggles with perfect comfort.
3. Positive-locking frames of polyethelene plastic, so flexible and tough they're unbreakable in normal usage. Complete mask weighs only 1 ounce. Attractively styled to suit the most discriminating wearer.
4. Defiance non-skid, natural rubber head-band with adjustable hook-and-eye fasteners holds mask firm and comfortably snug without tension or hair-pulling.

FLEX-A-FOAM FILTER MASK

Sample $1.40 postpaid

Write for new descriptive folder

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

For more details circle NED-4658 on enclosed inquiry slip

ASSEMBLING—Wire stitcher fastens metal parts up to 10 times faster

Bostitch Metal Stitchers are reported to provide the fastest known method of fastening aluminum, copper and cold-rolled steel sheet forms to each other and to rubber, plastics, fabrics.

These powerful machines manufacture their own staples out of heavy steel wire and drive them as fast as 295 stitches a minute. Because of this power and speed, many users report 50% to 90% savings in assembly time as compared with cementing, spot-welding, riveting, bolting.

Other advantages of fastening metal parts with Bostitch metal stitchers are that they provide a self-inspecting method and require less skill on the operator's part for high-speed production.

Bulletin 273 shows how and where Bostitch Metal Stitchers save time, labor, and money.

BOSTITCH®
738 Mechanic Street, Westerly, Rhode Island

For more details circle NED-4659 on enclosed inquiry slip

Casey's the nemesis of the twilight league —he's got his old stuff back—throws 'em in like the big leaguer the scouts say he could be. "Give the boss credit," quips Casey. "His tire replacement program did it. These MONARCH MONO-CUSHION TIRES pussyfoot over the floors, soak up jolts and jars instead of me. Now, I arrive at the ball park shake-free and sure. Don't forget the company wins, too, — with a champ 'ball club' plus big league savings on truck and floor maintenance."

The leading manufacturers of industrial vehicles, both hand and powered, use Monarch Tires as original equipment. Replacements are available through the distributors and manufacturers of your vehicles.

CUSHION . . . *all the way through*
TOUGH . . . *all the way through*

THE MONARCH RUBBER COMPANY
200 LINCOLN PARK • HARTVILLE, OHIO

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

For more details circle NED-4660 on enclosed inquiry slip

WITH GRIPCO LOCK NUTS

APPLIED FAST! *Gripco Lock Nuts* are started on the bolt threads *fast* just like a common nut.

LOCK FAST! When the Gripco deflected threads contact the bolt threads, the nut is seated *fast* and locked with a wrench.

HOLD FAST! Until it is removed with a wrench. *Gripco Lock Nuts* can be removed and reapplied many times without appreciable loss of locking effectiveness.

GRIPCO LOCK NUT
makes the Bolt-Thread End as secure as the Head End.

GRIPCO PILOT-PROJECTION WELD NUTS
Also *applied fast.* The pilot positions the nut quickly and accurately, and is instantly attached by resistance welding.

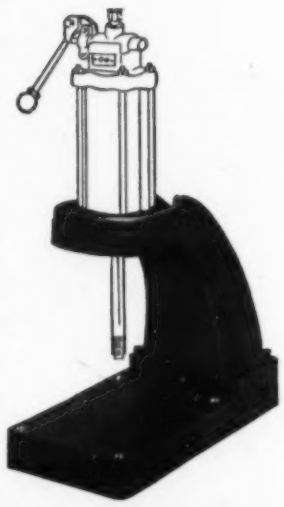
GRIPCO COUNTERSINK WELD NUTS
Weld Fast! The slanting "countersink" section catches loose metal particles and slides them down the slanting "countersink" surface away from the threads. No re-threading required!

GRIPCO WELD NUTS *are furnished with either lock or plain threads.*

GRIP NUT COMPANY
308-G S. Michigan Ave., Chicago, Illinois

For more details circle NED-4661 on enclosed inquiry slip

Air Motor and Arbor Stand Make Light Duty Air Press

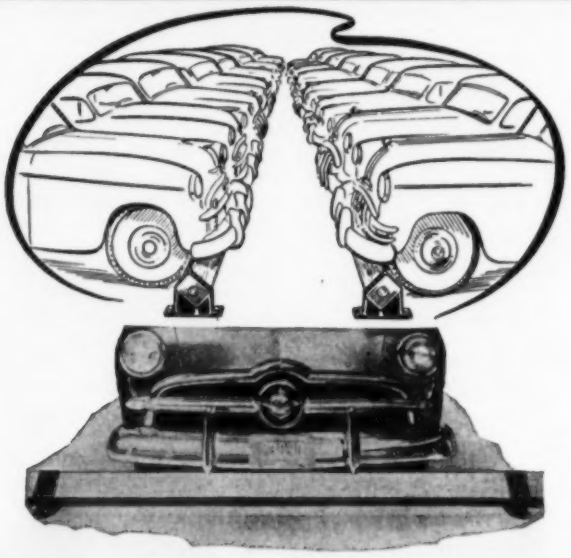


A SIMPLE, inexpensive arbor stand, combined with any one of four Bellows Air Motors, makes a compact, versatile, bench air press . . . suitable for regular production work or emergency use. Does the work of expensive standard air presses. Throat clearance 5". Table 6" x 9". Ram clearance 6". Arbor Stand can be bought separately or equipped with any one of four different sizes of Bellows Air Motors.

Write for Bulletin MS-5 today. Address: The Bellows Co., Dept. NED552, Akron 9, Ohio.

The Bellows Co.
AKRON 9, OHIO 1399

For more details circle NED-4662 on enclosed inquiry slip



SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire—no shock.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

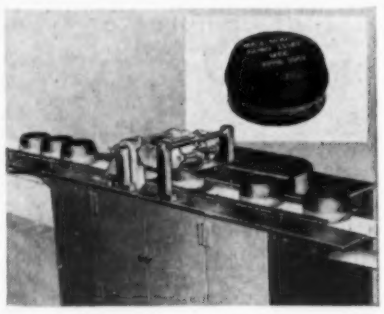
For more details circle NED-4663 on enclosed inquiry slip

CLEANLINESS TESTER
tests aluminum surfaces for welding

The surface electrical resistance in microhms is method employed by model 151-S tester to measure the effectiveness of oxide removal or cleaning process used to prepare aluminum sheets for welding. The Microhm meter can measure the total surface resistance of two sheets when placed between two dummy electrodes. Resistances as low as 0.000001-ohm can be measured with reading practically instantaneous. Instrument scale is 0 to 75 microhms, with higher readings possible through a selector switch which cuts in multipliers for measurements up to 750,000 microhms. Total weight, including internal battery power supply and waterproof-finished oak case is 22 lb. Made by **J. W. Dice Co.**, 1 Engle St., Englewood, N. J.

For more details circle NED-4664 on enclosed inquiry slip

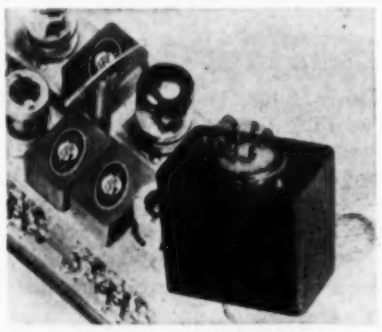
IMPRINTING MACHINES
codes regular and irregular shapes



Variety of unusual and difficult marking operations can be carried out by modifications made on standard line of Markocoder imprinting machines. Originally designed for imprinting supplementary copy on various types of packages and containers, machine can be used for marking legends on both regular and odd-shaped products or components in a continuous automatic operation. As set up in the production line, the Markocoder, receives products from one station, imprints them, then automatically discharges them to the next station. Only minor special modifications are involved. Photo shows machine for printing government specified identification legends on top of cork plugs used in naval shells. Made by **Adolph Gottscho, Inc.**, 6C Terminal Rd., Hillside 5, N. J.

For more details circle NED-4665 on enclosed inquiry slip

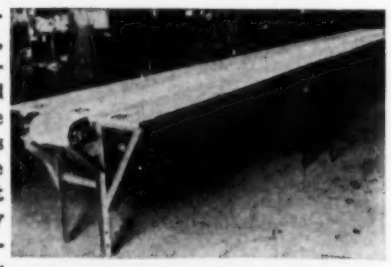
PULSE TRANSFORMER
three-winding unit is compact



Designed especially for use in low-power applications, type 130A1 miniature pulse transformer is adaptable for triggering and counting circuits, blocking oscillators, direct current isolation, inversion, pulse shaping and pulse transmission circuits. Three isolated windings provide versatility of applications. Convenient through-panel mounting uses same mounting hole pattern as conventional nine-pin miniature tube socket. Compactness permits mounting on tube strip or chassis in approximately same space as miniature tube. Short rise time and small droop minimize critical associated circuit design problems. Made by **Engineering Research Associates, Inc.**, Dept. A, 1900 W. Minnehaha Ave., St. Paul W4, Minn.

For more details circle NED-4666 on enclosed inquiry slip

TABLE TYPE BELT CONVEYOR
speeds assembly, inspection, etc.



Parts inspection, assembly operations, packaging, wet materials handling and other operations are speeded with this Table Conveyor. Table with 12-in. wide belt can be made in any desired length. Variable speed drive runs this belt at normal rate of 20 ft per minute, with maximum of 40 ft per minute being possible. Belt can be white Neoprene, stitched or woven canvas, or rubber, depending upon its use. A 15-in. wide maple table extension on either side of belt provides working area. Table top is Masonite or metal. Adjustable legs provide proper level for waist or stool working height. Made by **Flexoid Conveyor Co.**, 1543 E. 23rd St., Cleveland 14, O.

For more details circle NED-4667 on enclosed inquiry slip

BARRETT MODEL EX... *New and Improved* PALLET LIFT-TRUCK

Here's the smart angle that helps you save expense of power truck use. Let the Barrett EX Pallet Truck handle short hauls, load spotting, general pallet movement—all at lower cost. Fork types for single or double-faced pallets; also platform types...2500, 4000, 6000 lbs. capacity. Hydraulic Lift—4". Frame widths—25" and 27". Investigate Barrett before you invest.

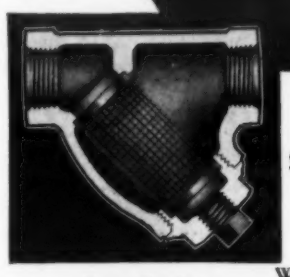
Write today for complete details and specifications on new and improved Model EX Pallet Lift-truck

BARRETT-CRAVENS COMPANY
4623 S. Western Blvd., Chicago 9, Illinois
Representatives in all Principal Cities
Canadian Licensee: S. A. Armstrong, Ltd., Toronto, Canada

BARRETT
One man does more than 3 or 4...with a Barrett

For more details circle NED-4668 on enclosed inquiry slip

don't let dirt damage your piping!



CRANE SEDIMENT SEPARATORS COST SO LITTLE

Iron Body and Cast Steel

Working Pressures
Up to 600 pounds steam. Iron patterns in sizes up to 12-in. Steel patterns to 1½-in. Screwed or Flanged Ends.

Why take chances with valuable and sensitive flow control equipment? Put Crane Sediment Separators in your pipe lines and be sure dirt, grit and scale can't do damage.

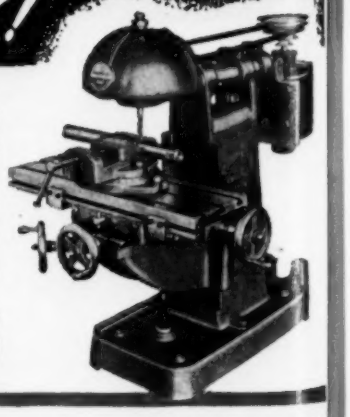
Simple in design; rugged in construction. Have extra large screening area assuring free fluid flow with minimum pressure loss. Effectively trap all foreign matter. Periodic blowing out is only maintenance required. Get full details from your Crane Catalog or call your Crane Representative.

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE *Everything for Every Piping System*
VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle NED-4669 on enclosed inquiry slip

A benchmaster mill
handles thousands of jobs now done on a big mill
And deliveries are QUICK!

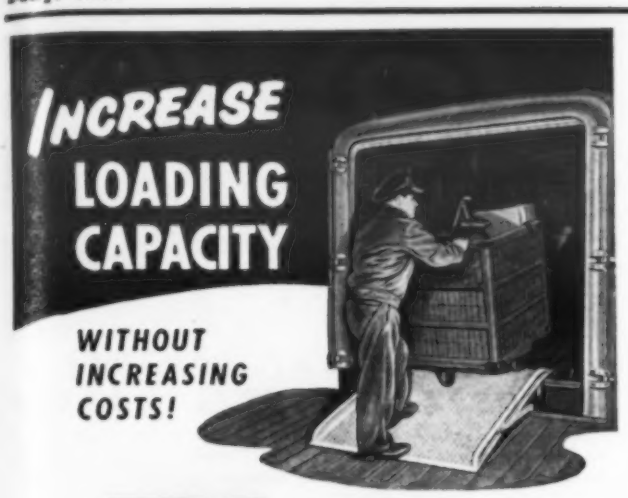


Why tie up a big mill to cut a keyway, to mill flats or dovetails, to do precise dividing jobs, etc? BENCHMASTER gives you EQUAL ACCURACY, GREATER SPEED and FAR EASIER OPERATION *at a fraction of big mill cost*—and will surprise you with its capacity!

Made in vertical, horizontal and production models. Write for literature!

benchmaster PUNCH PRESSES AND MILLERS
1835 W. Rosencrans Ave. Gardena, California

For more details circle NED-4670 on enclosed inquiry slip



MagLiner
MAGNESIUM
DOCK BOARDS

MAGNESIUM light! MAGNESIUM strong!
MAGLINER Dock Boards provide strength-to-spare for the heaviest of loads and equipment, yet are easily handled by one man! Eliminate loading accidents . . . lifting injuries! Get the benefits of smoother, faster, more efficient loading. Before investing in any dock board, write for descriptive bulletin DB-203.
Standard and Custom-engineered Models

MAGLINE, INC. • P.O. BOX 396 • PINCONNING, MICHIGAN

For more details circle NED-4671 on enclosed inquiry slip

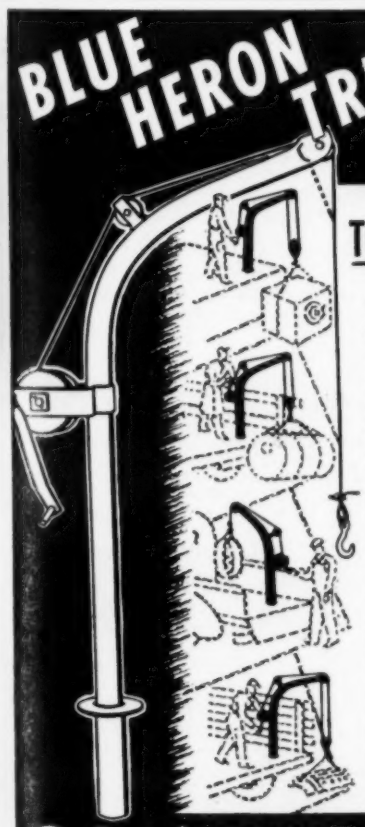
UNIVERSAL
DRILL
BUSHINGS
establish new
standards of
high quality

Universal Drill Bushings, produced at the big, modern plant of the Universal Engineering Company, have been first in industry for more than 25 years. They are accurately machined with superhoned bores from the finest quality steel and carefully inspected to insure maximum efficiency and extremely long life. Write today for complete information.

The modern home of finer production tools
UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN
156-A

For more details circle NED-4672 on enclosed inquiry slip

BLUE HERON TRUCK CRANE SAVES



Time Money Labor

ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

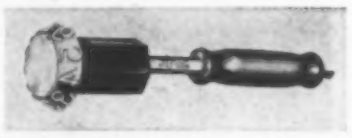
Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

For more details circle NED-4673 on enclosed inquiry slip

ELECTRIC BRANDING IRON
made in three numeral sizes



Branding numerals or dates on tires, barrels, batteries, poles, grandstand seats and railroad ties is made easy with electric branding iron having numerals 0 to 9 around periphery of branding die plus space on face plate for additional copy. Dies are alloy which resist scale and corrosion, and transfer maximum heat in minimum time by means of valve seat contact between die and heater. Being hexagon in shape, iron readily clamps in fixture. Irons are made in ⅜, ½ and ¾-in. numeral sizes; can be furnished for 110 or 220 v ac or dc, any cycle circuits; and have 6-ft cord and plug. Made by **Hexacon Electric Co.,** 145 W. Clay Ave., Roselle Park, N. J.

For more details circle NED-4674 on enclosed inquiry slip

ELECTRODE DRYING OVEN
eliminates moisture absorption

Low hydrogen and other coated welding electrodes are kept in ready-to-use condition by this model WRD-1 welding rod drying oven. Square and compact in design, oven has ten compartments which hold 250 lb of electrodes. Compartments are removable for handling larger units. Reinforced mesh shelf permits efficient circulation of heat and controls moisture. This oven is also usable for preheating, aging, drying and dehydrating operations. Made by **Despatch Oven Co.,** 325 Despatch Bldg., Minneapolis 14, Minn.

For more details circle NED-4675 on enclosed inquiry slip

MERCURY SWITCHES & RELAYS
triple-distilled mercury adds life

Introduced two years ago (*NED, June* '50), metal-clad mercury switches and timer relays employing triple-distilled mercury have been operating without failure in all types of service. Performance records have been tabulated for installations involving abnormally high and low temperatures, overload circuits, high moisture and alkaline conditions and rapid cycle operations. As a result of these checks, company's engineers state that life of 10 years is possible under normal operating conditions. Controls are made by **Durakool, Inc.,** 1051 N. Main St., Elkhart, Ind.

For more details circle NED-4676 on enclosed inquiry slip

Provide Easy Visibility
with the NEW MODEL "CS"
TOP READING COUNTERS

Available in STROKE and ROTARY Models

Designed for application on production machines. This is the only counter made in which the entire case is a single casting . . . provides greater rigidity, tighter seal of working parts and new streamlined contour. This unit is compact and rugged, and features a flush mounted window to assure greater visibility of easy-to-read numerals.

Send for "CS" Literature

DURANT MANUFACTURING COMPANY
1922 N. Buffum Street, Milwaukee 1, Wisconsin
122 Orange Street, Providence 3, R. I.
Representatives in Principal Cities

PRODUCTIMETERS
SINCE 1879 Count Everything

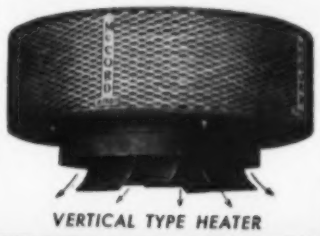
For more details circle NED-4677 on enclosed inquiry slip

Better Heat Distribution
WITH
McCORD
Unit Heaters

HORIZONTAL TYPE HEATER

More Heat . . .
Better Distribution

More heat, better distribution is the answer to any heating problem. McCord, because there is a model and type to meet each particular condition, will do a better heating job. Every improvement that engineers and the experience of many users could suggest is incorporated in the improved models of McCord Unit Heaters. Due to the design and careful attention to balance a new degree of quietness has been attained. The scientifically designed spiral fin tube heating surface provides maximum heat transfer capacity.



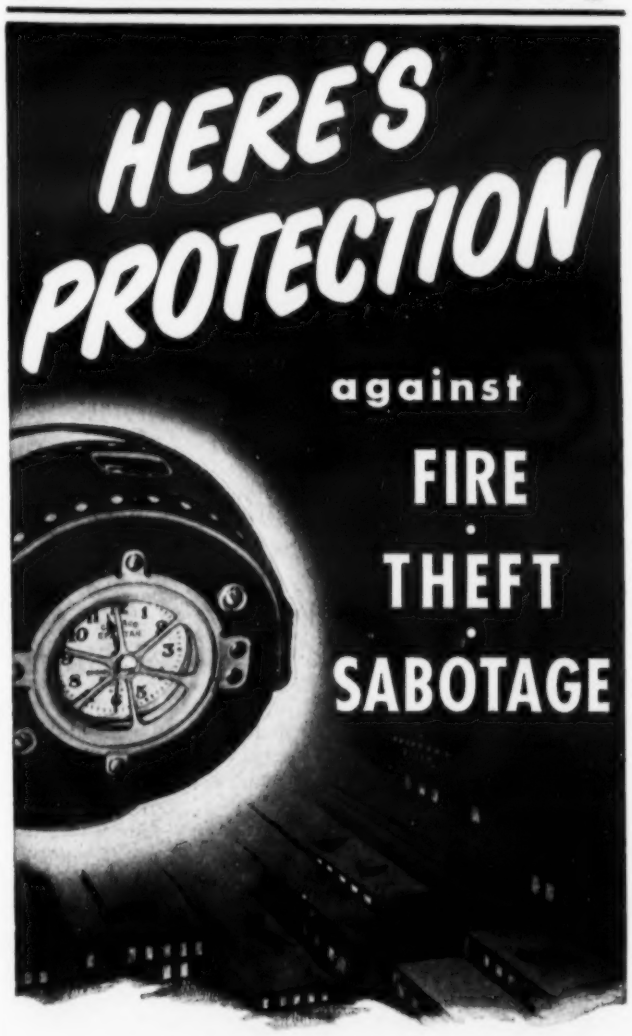
VERTICAL TYPE HEATER

McCORD CORPORATION
2580 E. Grand Blvd.
Detroit, Mich.

Specify McCORD ON YOUR NEXT JOB

For more details circle NED-4678 on enclosed inquiry slip

HERE'S PROTECTION
against
FIRE
THEFT
SABOTAGE



CHICAGO
Watchclock System
"The first . . . and still the first."
LOWERS YOUR INSURANCE RATES!

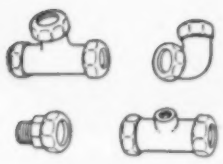
It keeps track of your watchman's tracks—so accurately and positively that the CHICAGO WATCHCLOCK System is approved by THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUALS LABORATORIES. Users earn reduced insurance rates. Thus the CHICAGO WATCHCLOCK System quickly returns its small cost to you.

Write for FREE new folder that completely describes this simple, low-cost, tamper-proof system of extra protection to property. Write for it NOW!

CHICAGO WATCHCLOCK
DIV. GREAT LAKES INDUSTRIES, INC.
1522 S. WABASH AVE., CHICAGO 5, ILL.
OFFICES IN PRINCIPAL CITIES

For more details circle NED-4679 on enclosed inquiry slip

A permanent, "Flexible-Tight" joint in just 30 seconds. No threading, no exact pipe fitting or alignment necessary. Resilient rubber gaskets in the Dresser Style 65 give you permanent protection against vibration, normal expansion and contraction stresses that spring leaks in other joints. Sizes 3/8" to 2". Write for catalog.



Complete line of couplings, ells, tees, etc. available.

DRESSER
"NO-THREAD" FITTINGS
Dresser Mfg. Div., 59 Fisher Ave., Bradford, Pa. (One of the Dresser Industries). Warehouses: 1121 Rothwell St., Houston, Tex.; 101 S. Bayshore Highway, S. San Francisco, Calif. — Sales Offices: New York, Philadelphia, Chicago, Houston, South San Francisco — In Canada: 629 Adelaide St., W., Toronto.

For more details circle NED-4680 on enclosed inquiry slip

• Countless dollars are wasted every day when employees leave their work to reach people in other departments! Executone Intercom gives everyone *instant* contact with everyone else.

Helps Step Up Production — With Executone, everyone is *always* within talking distance—*without taking a single step!* With the speed of sound, questions are answered, information exchanged, material ordered and personnel located. With people on the job, you get *more* work done *faster!* Every working hour becomes more productive for you and your employees.

Cuts Operating Costs — Executone relieves the switchboard of all "inside" calls, frees phones for receiving important customer calls. Executone quickly pays for itself with increased production and efficiency.

get the facts

Executone
intercom systems

EXECUTONE, INC., Dept. E-4
415 Lexington Ave., New York 17, N. Y.
Without obligation, please let me have:
☐ The name of your local distributor.
☐ Free descriptive literature.
NAME_____ TITLE_____
FIRM_____
ADDRESS_____ CITY_____

In Canada — 331 Bartlett Ave., Toronto

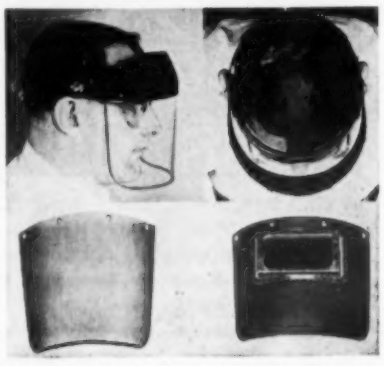
For more details circle NED-4681 on enclosed inquiry slip

ABRASIVE BELT
serrated edge speeds grinding work

Originally developed for automatic precision grinding and finishing of jet turbine and compressor blades, 3M Scallop-Edge abrasive belt is reported to reduce finishing costs by 20 to 50 per cent. Belt is used on crowned, contoured or rounded-edge wheels, or with shaped back-up supports, and can be used either by machine or by hand. Belt has broad application in metalworking for all operations involving small-radius grinding and filleting. Scallops of belt curve around edges of contact wheel, allowing fillet areas to be polished on the edge-contour of the wheel. Made by **Minnesota Mining & Mfg. Co.,** Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

For more details circle NED-4682 on enclosed inquiry slip

SAFETY FACE SHIELD
fits over modern-framed glasses



Wide front and side clearance of model No. 301 face shield allows it to be worn over glasses with ultra - modernistic frames as well as industrial goggles, and affords maximum ventilation. Shield is glove - buttoned to form - fitting head gear which is readily adjusted to any head shape or size. Three types of shields are interchangeable on one head gear, a plastic type for general use, a fiber front type with glass holder for gas welding and a screen window shield for scaling, heat, cyaniding and similar operations. Made by **Boyer-Campbell Co.,** Safety Div., 6540 St. Antoine St., Detroit 2, Mich.

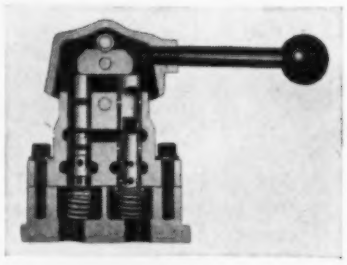
For more details circle NED-4683 on enclosed inquiry slip

WORK LAMP
has high intensity center

Intensity of the Bulls-Eye center of this work lamp can be increased up to four times its original brightness by manipulation of a plastic ring. Criss-crossing reflected rays minimize glare and practically eliminate shadows. Design permits use of a lower wattage standard frosted bulb, thus reducing heat. Interference of bulb with vision is reduced by its location high in the reflector element. Three interchangeable bases are available: bracket base for bolting to machine or bench; table base with receptacle; universal clamp for attaching to any shape up to 3 in. Made by **Lindly & Co.,** 248 Herricks Rd., Mineola, L. I., N. Y.

For more details circle NED-4684 on enclosed inquiry slip

AIR CONTROL VALVES
offered with three rocker types



Among improvements made in line of air control valves are lower seats of molded oil resistant and high impact resistant material and maintenance of lever's neutral position by two light springs located directly under lower poppets. Three interchangeable rocker types are available: locking, non-locking and a combination of the two. Pins, rollers, rockers and upper wearing surface of upper poppets are hardened, and the entire mechanism is shielded by a high tensile manganese casting. Lower poppets are high tensile brass and are enclosed in a bronze housing. All working parts can be replaced without special tools and without disturbing piping. With handle in neutral position, both poppets are closed to pressure and open to exhaust. Vertical and horizontal handles and side or bottom port bases are optional. Made by **Numatics,** 825 Commerce Rd., Milford, Mich.

For more details circle NED-4685 on enclosed inquiry slip

EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES — SCAFFOLDING
FABRICATION SUPPORTS — CONVEYOR SUPPORTS
LAYOUT WORK — MAINTENANCE WORK
BENCHES — And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

Send today for BULLETIN No. 500 covering BRUSCO Boxes and Hoppers.

Brusco HANDLING EQUIPMENT
BRUMMELER STEEL PRODUCTS CORPORATION
1411 Ionia Ave., S. W. Grand Rapids, Michigan

For more details circle NED-4686 on enclosed inquiry slip

Waste Hours...or Work Hours in Your Plant?

Why Overwork Three Men This Way...
Old-fashioned hand-handling means wasted man-power, slowed down production and shipping bottlenecks.

When One Man Does It Easier This Way
Press-button magic moves tons and tons with finger-tip control. Saves hours and dollars in handling costs every working day!

SPEED PRODUCTION...SHIP MORE GOODS FASTER

Year after year, more and more companies have come to learn that Automatic "101" TRANSPORTERS cut their materials handling costs as much as 50% or more, while adding valuable man-power in man-hours saved.

"101" TRANSPORTERS are sturdy, too. To prove how ruggedly these electric trucks stand up—to our knowledge every TRANSPORTER manufactured is still in service . . . and tens of thousands have been built. That's why there are *more* Automatic TRANSPORTERS in use today than any other operator-led electric truck.

PUT YOUR FINGER ON Materials Handling Costs *In Your Own Plant!*

Let us send you—free and without obligation—the new "*Materials Handling Analysis Guide*" that helps you check materials handling problems in your own plant . . . and reveals how you can improve material handling efficiency and save money in *your* business.

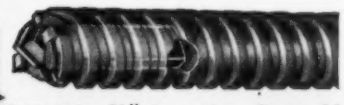
"101" Transporter — A PRODUCT OF AUTOMATIC — Lightens LIFE'S LOADS
Trade Mark Reg. No. 562,636

Automatic ® 61 W. 87th Street, Dept. E-2, Chicago 20, Illinois

For more details circle NED-4687 on enclosed inquiry slip

DRILL ANY SIZE HOLE IN ANY MASONRY MATERIAL
with Carbide Tipped

Cyclo-Core FOR HARD CONCRETE using rotary type drill with pressure applied.



Drills holes ¾" dia. and up. Removable Cyclo-Center accessory allows precision locating and starting of hole without use of wooden template.

Cyclo-twist FOR SOFT and MEDIUM MASONRY MATERIALS using electric rotary drill, drill press or hand brace.

Drills holes 3/16" to 1" dia. up to 36" deep. Dust removing spiral flutes run from cutting edges to shank end.

Thunderbolt FOR HARD or VERY HARD MASONRY MATERIALS using electric or pneumatic hammer

Drills holes 3/16" to 1¾" dia. up to 18" deep. Carbide tip withstands shock and wear. Taper proportioned to withstand crystallization.

SEND FOR NEW MASONRY DRILL BIT GUIDE — "Helps you choose the RIGHT bit for EACH job."

New England Carbide TOOL CO., INC.
60 BROOKLINE STREET, CAMBRIDGE 39, MASS.

For more details circle NED-4688 on enclosed inquiry slip

Fill up cracks, ruts, shallow holes, uneven spots, etc. in concrete floors with Smooth-On No. 7B Quick Floor Patch Cement. The patch will harden quickly, adhere strongly to an old floor, and is ready for use as soon as it is hard.

Anyone can apply Smooth-On No. 7B by following the simple directions that come with it. The patches will stay tight, because Smooth-On No. 7B expands slightly as it hardens and wedges the patch securely in place.

Order Smooth-On No. 7B Quick Floor Patch Cement in 1-, 5-, 20- or 100-lb size.

FREE **Floor Patch Folder and Metal Repair Handbook**

Folder gives full information on Smooth-On No. 7B Quick Floor Patch Cement. With it we'll send you the famous 40-page Smooth-On Repair Handbook, full of time-saving, money-saving repairs on plant and home equipment. Send now.

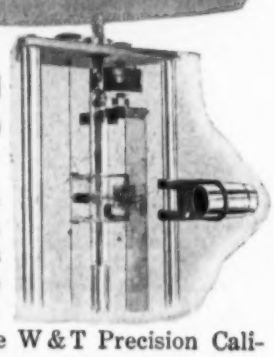
SMOOTH-ON MFG. CO., DEPT. 10
570 Communipaw Ave., Jersey City 4, N. J.

Do it with SMOOTH-ON
QUICK FLOOR PATCH CEMENT

For more details circle **NED-4689** on enclosed inquiry slip

INTRODUCING . . .

THE W&T PRECISION CALIBRATING STANDARD



The new W&T Precision Calibrating Standard offers an accurate and convenient means for measuring either absolute or differential pressure.

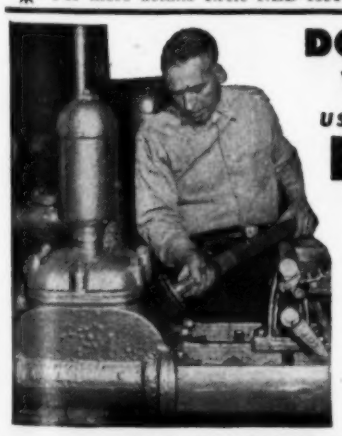
Outstanding features of the W&T Precision Calibrating Standard include:

Range of Absolute or Differential Pressure: ..... 0 to 800 mm. Hg. by 1 mm. or any other units
Magnetic Vernier Graduation: .....One-tenth scale graduation
Accuracy: .....1 part in 5000
Built-in Thermometer .....Full-range indication
Temperature and gravity compensated scale
Filtered pressure inlet
Meniscus reading eliminated

WALLACE & TIERNAN PRODUCTS, INC.
ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS
Belleville 9, New Jersey • Represented in Principal Cities

A-90

For more details circle **NED-4690** on enclosed inquiry slip

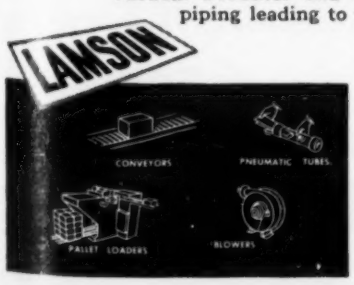


DON'T GAMBLE WITH DUST
USE
EXIDUST VACUUM CLEANERS

There's no gamble when Exidust is on the job to eliminate the dangers of dust such as fire or explosion, sickness or injury, machine damage or product spoilage.

EFFECTIVELY REMOVES ALL DUST . . . This sure and effective system operates on a powerful suction that draws in such material as flour or coal dust, sand or soot, grime and even metal bits from any flat or irregular surface.

DESIGNED TO FIT YOUR NEEDS . . . Each Exidust installation is engineered to meet individual plant requirements. Essentially, it is built around a Billmyre Vacuum Producer and separator-filter tank with piping leading to inlet valves on each floor.



Let us show you how effectively Exidust can eliminate your dust problems. Write for Exidust Bulletin D-5. Lamson Corporation, Billmyre Blower Division, 503 Lamson St., Syracuse 1, N. Y. Offices in principal cities. Consult your Red-book.

For more details circle **NED-4691** on enclosed inquiry slip

New Processes and Materials

MOLDED RUBBER SHAPES bonded to metal or ceramics

Recently made available are specialized or custom fabricated parts consisting of molded rubber shapes bonded to any ferrous or nonferrous metal component or to various ceramic compositions. Wide variety of sizes and shapes can be produced for application to processing equipment of all types, control valves, electric control devices, conveyors, heat treating equipment, etc. Intricate and simplified parts can be fabricated from natural or reclaimed rubber and from such synthetics as buna S, buna N, Neoprene, butyl, Thiokol and others. Parts can have tensile strength ranging from 500 to 3500 psi, durometer hardness from 30 to 100 and elongation from 50 to 900 per cent. Rubber-to-metal parts can be furnished which remain stable upon exposure to temperatures ranging from −75 to 200° F. Other stocks are resistant to abrasion, weathering and various chemicals. Made by **Andrews-Alderfer Co.**, 1102 Home Ave., Akron 10, O.

For more details circle **NED-4692** on enclosed inquiry slip

PLASTIC PIPE for water, suction, pressure lines

Made with heavy wall thickness, WS flexible plastic pipe is suited for water installations and applications involving suction or higher pressures. Pipe is light in weight and has absolute resistance to rot, rust and electrolytic corrosion. Its smooth internal surface will not accumulate scale or sediment. No special tools are required for connection. Plastic-to-plastic or plastic-to-metal connections can be made with molded plastic fittings. Pipe is available in nine sizes ranging from ¾ to 6 in. Working pressure is 120 psi at 120° F in sizes to 1½ in. and slightly less in larger sizes. Smallest diameter is supplied in 400-ft coils and weighs 0.216-lb per foot. Largest size is furnished in 25-ft straight lengths weighing 5 lb per foot. Made by **Carlon Products Corp.**, 10225 Meech Ave., Cleveland 5, O.

For more details circle **NED-4693** on enclosed inquiry slip

The Case Of The Haunted Engineer

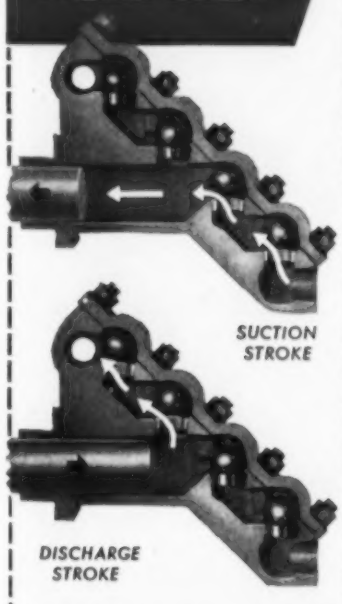
Today—find out how WEKSLER can make things smoother in YOUR plant! Ask your jobber for Important Free Bulletin AA50 or write to:

"Industrial America's Right Arm"
WEKSLER THERMOMETER CORPORATION
52-56 W. Houston St., N. Y. 12, N. Y.
For Industrial Thermometers Send for Catalog 125.
For Glass Engraved on Stem Thermometers and Hydrometers, Send for Catalog 225.
For Dial Indicating and Recording Thermometers, Send for Catalog 325.
For Dial Indicating and Recording Pressure Gauges, Send for Catalog 525.

For more details circle **NED-4694** on enclosed inquiry slip

NEED PRECISION PUMPING?

This exclusive Milton Roy Liquid End Step-Valve...

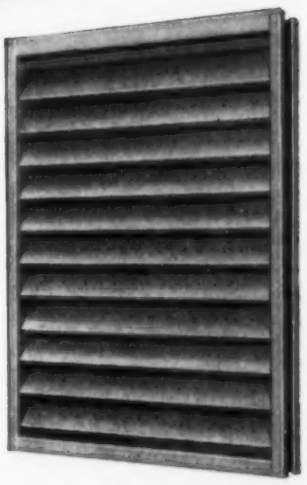


. . . is one of the big reasons why Milton Roy Controlled Volume Pumps—both Air-Powered and Motor-Driven—give you *precise* pumping. The valve is non-clogging, snap-acting, and seats positively. Air and gases cannot be trapped. *Double* ball-checks prevent loss of accuracy if one ball is prevented from seating by particles in the fluid being handled. Pumping against pressures up to 25,000 psi, within volume ranges from 3 milliliters per hour up to 1360 gallons per hour per liquid end, Milton Roy Controlled Volume Pumps handle any clear liquids, solids in suspension, and highly viscous materials such as tars and sludges.

For detailed information on the *exclusive* Milton Roy Liquid End Step-Valve Design . . . and on Controlled Volume Pumps . . . request Bulletin No. 151. Write today to—

MILTON ROY COMPANY
1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

For more details circle **NED-4695** on enclosed inquiry slip



Balance
your ventilation;
get ample fresh air intake capacity with Swartwout Airlouver

Custom-made for each job *without premium cost*, this weatherproof louver system provides unusual advantages—has better-than-average free opening area. The wide range of odd-size units available through our unique manufacturing procedure makes easy and economical the filling of any size opening.

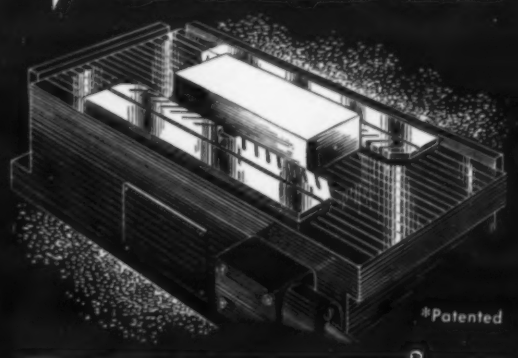
Overlapping blades in the Airlouver are mounted in sturdy formed channel frame. The adjustable style features positive closing and quick change of blade position to any variation between open and closed. Airlouver is made in fixed-blade style also. Write for Bulletin 339C.

18511 Euclid Avenue, Cleveland 12, Ohio
The Swartwout Co.
Roof Ventilators and Ventilating Louvers
POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

For more details circle **NED-4696** on enclosed inquiry slip

Magna-Vise*

...INCREASES THE VALUE OF YOUR MAGNETIC CHUCKS ...ENABLES THEM TO HOLD *any* rigid non-magnetic material

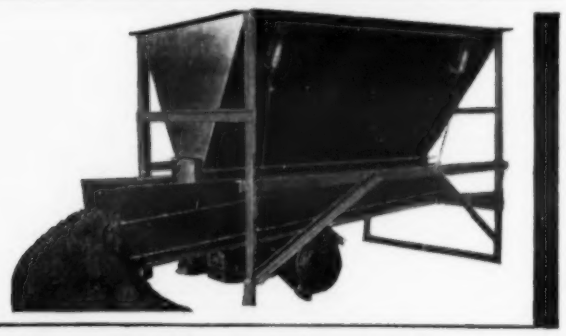


*Patented

Get full details on this revolutionary shop-proved device . . . write Dept. ND-52

Hanchett MAGNA-LOCK CORPORATION
Magna-Lock Magnetic Chucks and Devices
BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle NED-4698 on enclosed inquiry slip



If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

Simplicity ENGINEERING CO., DURAND, MICH. 101

For more details circle NED-4699 on enclosed inquiry slip

it's POWERFUL... it's a HEIN-WERNER!

On small jobs, or big jobs—wherever powerful hydraulic force is needed—you'll find a Hein-Werner Hydraulic Jack will fill the bill.

Every model in this line is powerful . . . dependable . . . versatile . . . A Hein-Werner Jack can be effectively used for lifting, pushing, pulling, bending, straightening, and pressing operations.

Made in models of 3, 5, 8, 12, 20, 30, 50, and 100-tons capacity . . . See your industrial distributor or write us for details.

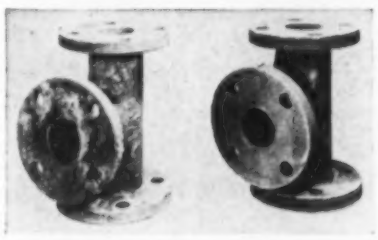
Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION
Waukesha, Wis.

For more details circle NED-4700 on enclosed inquiry slip

New Processes & Materials

CHEMICAL TREATMENT removes rust and phosphatizes



Rustclean chemical treatment destroys and removes rust, tarnish and light oil from surfaces of steel, iron, aluminum, zinc and cadmium. It also phosphatizes surface for paint and retards corrosion. Tarnish can be removed from copper and its alloys by the compound. Use can be in metal processing plants or in maintenance of storage tanks, machinery, steel partitions and pipelines. Rustclean 12 is for wipe-on use for large parts or in plants whose equipment or production is limited. Rustclean 15 is more concentrated and is used in an immersion process in a stainless steel vessel or a tank lined with rubber, polyethylene or asphalt. Use is most effective above 160° F. Special grades which remove rust without any attack on the steel and which prevent hydrogen embrittlement are available. Types are available to meet all military specifications. Compound contains mild acid, but does not fume or emit toxic vapors. Made by **Octagon Process Inc.**, 20 Bank St., Staten Island 1, N. Y.

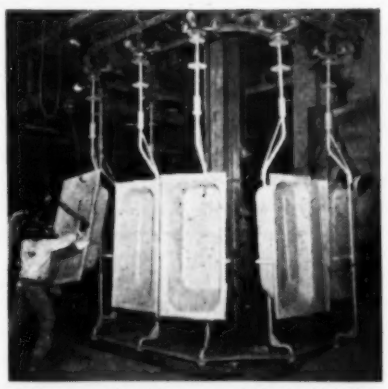
For more details circle NED-4701 on enclosed inquiry slip

SYNTHETIC RESIN SEALER seals gaps in nonporous surfaces

Wide seams and gaps in metal, glass and nonporous surfaces can be sealed against dust, drafts and moisture with putty-like permanently soft synthetic resin material. This nonshrinking, moistureproof and weather-resistant product is used in automotive work to seal holes in firewalls, seal along garnish molding and windshield center bar and to seal body joints and openings around trim molding clips. It is also used to seal around bolts and washers in fabricating auto body units and to cap holes where more fluid sealers might drip out. Material is a gray rubbery dough applied easily by knife or pressure extruding equipment. It rolls by hand into beads or globs to be set in place. It does not dry out or become brittle with aging and is unaffected by continuous service in temperatures up to 200° F. Made by **Minnesota Mining & Mfg. Co.**, Adhesives & Coatings Div., Dept. NED, 411 Piquette Ave., Detroit 2, Mich.

For more details circle NED-4702 on enclosed inquiry slip

MATTE ENAMELING FINISH obtained by abrasive blasting



Airless abrasive blasting can be used to clean metallic surfaces and produce a matte type finish for vitreous enameling, a texture which has proved to be very satisfactory for holding enamel in a permanent bond. A manufacturer of sanitary ware is using specially-designed airless blast cabinet to maintain a continuous cleaning production of 120 bathtubs, 960 sinks or 720 washbowls per hour. Five rotating wheels centrifugally hurl metallic abrasive at the ware as it is carried through the cabinet on rotating hooks. Rotation permits abrasive to reach all areas of metal to be cleaned, plus allowing several of smaller units to be carried on each hook. Only operation requiring operator is loading and unloading. Blasting equipment made by **American Wheelabrator & Equipment Corp.**, 508 S. Byrkit St., Mishawaka, Ind.

For more details circle NED-4703 on enclosed inquiry slip

ALUMINUM WELDING RODS have high purity weldability

High ratings in weldability, smooth finish, speed of application and uniform results are features of X-43S and X25 high-purity aluminum welding rod applicable with alternating or direct current electric welding and oxy-acetylene welding equipment. Former meets Government specification QQ-R-566 type 1, class FS-RAL-43, while latter meets specification QQ-R-56 type 1, class FS-RAL-2. Rods' metallurgical cleanliness is result of extrusion to exact diameter required which minimizes drawing and possibility of minute surface inclusions of drawing compound. Standard diameters are $\frac{1}{16}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{3}{16}$ and $\frac{1}{4}$ in. while standard length is 36 in. Rod is also packaged in coil form and in special lengths. Made by **All-State Welding Alloys Co.**, 273 Ferrisden Ave., White Plains, N. Y.

For more details circle NED-4704 on enclosed inquiry slip

UPS Hot Water Supply DOWNS Costs All Along The Line

You'll get more hot water for your money by simply installing a General Instantaneous Water Heater as your primary or secondary source. Just tap heater into existing steam line near washrooms or processes where hot water is needed—no bulky storage tank, no excavating, no complicated piping. Operates on live steam up to 125 lbs. through shell . . . or with exhaust steam, or boiler water. Piping-hot, rust-free water supplied through seamless copper tubing—no maintenance worries.

Available in 12 space-saving sizes—6 to 300 gals. per min. Largest size measures only 15" x 120". Write for Catalog 20. General Fittings Co., Dept. I, 123 Georgia Ave., Providence 5, R. I.

GENERAL GF

TANKLESS AND INDIRECT WATER HEATERS AND HEATING SPECIALTIES

For more details circle NED-4705 on enclosed inquiry slip

PERMUTIT "Softens" THEIR HANDLING JOBS, TOO

This installation in the Permutit Company again demonstrates the versatility of American Mono-Rail engineering and overhead handling equipment. Every step from cleaning and etching to finished painted tank is done by a continuous "flow" operation. The system boosted production, cut handling labor, improved space utilization, reduced material damage, bettered working conditions and improved production control.

American MonoRail engineers can show you how to increase production and lower costs in your plant. Just drop us a line.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

For more details circle NED-4706 on enclosed inquiry slip

CONTROL COSTS

Stop human errors in reading, remembering, recording! Toledo Printweigh Scales provide accurate printed weights . . . *accurately* recorded. Send for bulletin 2021. Toledo Scale Co., Toledo 1, Ohio.

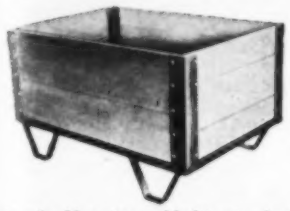
TOLEDO®
Headquarters for SCALES

For more details circle NED-4707 on enclosed inquiry slip

In production or in storage

IRONBOUND EQUIPMENT HANDLES SMALL PARTS MORE EFFICIENTLY

Standard 2-way entry bolted type skid built to handle loads up to 5 tons.



Standard box top welded to standard skid. Available too, with removable boxes. Handles many items in production and storage.

Flexible arrangement of boxes and skids permits tiering and stacking to meet your individual requirements. Provides quick availability, easy handling, or storage for complete units or parts.

Each of the units illustrated has an important use in modern industry. Ironbound skid platforms and box tops are prime sources of increased plant capacity so vitally needed today. Our representative can help you to increase your output and plant space. Catalog GP-7 may help you, too!

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

For more details circle NED-4708 on enclosed inquiry slip

Save space fuel and installation expense

with **DUNHAM**
CONDENSATION PUMPS

Dunham Condensate Pumps with side-mounted motors require little floor space, are low in first cost and inexpensive to maintain.

Rapid return of hot condensate to boilers saves fuel, saves makeup water . . . minimizes difficulties from boiler incrustation and system corrosion.

Dunham Pumps are easy to install without bars or bed plates. Completely wired, they're ready for operation when piping is connected. For full information, WRITE FOR BULLETIN 1401-14.

DUNHAM

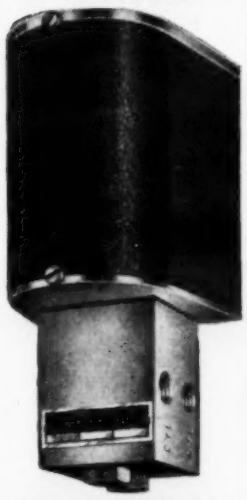
C. A. Dunham Co.
400 W. Madison St., Chicago 6, Ill.
In Canada:
C. A. Dunham Co., Ltd., Toronto
In England:
C. A. Dunham Co., Ltd., London

HEATING SYSTEMS AND EQUIPMENT

For more details circle NED-4709 on enclosed inquiry slip

4-WAY SOLENOID OPERATED AIR-VALVE only $32.50

For Fast Operation of Cylinders up to 3" Diameter



Compact sturdy construction, precision engineered for long, uninterrupted heavy duty operation.

Has small, well protected solenoid—operates small cylinders up to 3" dia. and larger cylinders where unusual speeds are not required.

Quantity and O.E.M. discounts. Write for description, discounts, etc.

IMMEDIATE DELIVERY

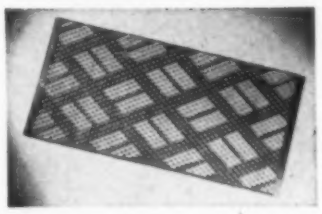
3-WAY VALVE
Same Design
only $19.80

AUTOMATIC VALVE CO.
37425 GRAND RIVER AVE., FARMINGTON, MICH.

For more details circle NED-4710 on enclosed inquiry slip

New Processes & Materials

PLASTIC FLOOR MATS are long-wearing and greaseproof



Made of vinyl plastic links woven on rust resisting steel wires, Ever-Tred floor matting is nonabsorbent, nonporous, greaseproof and long wearing. For use where exposed to strong acids, mats are made with flexible vinyl tubing framework. Slightly corrugated surface on one side provides a safe slip-resistant walking surface, even where floors are wet. Deeply corrugated surface on underside affords good dirt removal. Links are offered in five brilliant fadeproof colors. These green, red, brown, black and white links can be used in any combination to form any pattern. Matting is available in any length up to 6 ft wide and ⅜-in. thick. Made by **American Mat Corp.**, 1733 Adams St., Toledo 2, O.

For more details circle NED-4711 on enclosed inquiry slip

PHENOLIC MOLDING PLASTIC has good mold release, low warpage

All-purpose phenolic plastic called Resinox GP-1000 has broad application in all types of transfer, plunger or regular compression molding, with or without electronic preheating. Material's features include universal flow, freedom from flashing, fast cure, good mold release, strain-free parts and high uniformity. Flow characteristics permit reduction of transfer and clamping pressures and minimize need to inventory variety of flows. Formulated by **Monsanto Chemical Co.**, Plastics Div., Dept. NED, Springfield 2, Mass.

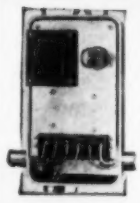
For more details circle NED-4712 on enclosed inquiry slip

PLASTIC-IMPREGNATED PACKING is resilient and withstands acids

Impregnation of braid-over-braid asbestos packing with Teflon plastic gives it resiliency and permits a tight, lasting seal at low gland pressure. It also solves the cold flow problem often encountered with solid Teflon packing. No. 401 packing is furnished in continuous form, and with its resilience, one size is suitable for packing a number of different stuffing boxes. It cannot be attacked by nor contaminate any industrial acid, alkali or solvent. Serviceable from −100 to 500° F, it does not sieze shaft or spindle. Square cross section in sizes from ⅛ to 1 in. by 1/16-in. increments is available. Made by **Flexrock Co.**, Mechanical Packing Div., 3670-A Cuthbert St., Philadelphia 4, Pa.

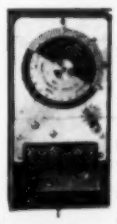
For more details circle NED-4713 on enclosed inquiry slip

Lumenite OFFERS DEPENDABLE AUTOMATIC CONTROLS



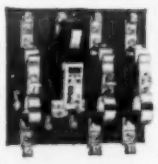
LUMENITE LIQUID LEVEL CONTROLS
Electronic action maintains and/or signals exact levels to 1/100 in. Floatless—no moving parts—sanitary—trouble free—no upkeep. For any liquid in any container—hot or cold—pressure or open. Easy installation. Write for detailed bulletin L-143.

LUMENITE TIMING CONTROLS



Complete line of industrial operation timers—manual or automatic reset. Time switches and timers. Improved and simplified construction. Write for bulletin T-143

LUMENITE MAGNETIC CONTACTORS



Electrically operated and held switches for heavy loads. Work with Electronic Level or Time Controls.

Reversing switches—transfer switches. New noiseless operation. Write for bulletin C-143

Lumenite Electronic Co.
407 S. Dearborn St., Chicago 5, Ill.

For more details circle NED-4714 on enclosed inquiry slip

Today's Answer to Tramp Iron Hazards

DINGS NON-ELECTRIC ALNICO PERMA*-PULLEY

REMOVING damaging tramp iron the Perma-Pulley way brings you a combination of advantages unmatched by any other tramp iron separator:

- **Automatic** — unaffected by power failures, requires no attention. Just install it and forget it.
- **No Maintenance** — no wiring, no electrical accessories to require repairs or replacement.
- **No Operating Cost** — pays for itself in power savings.
- **Magnetic Permanence *Guaranteed*** for the life of the installation.
- **Powerful** — Tremendous surface strength means positive tramp iron removal.

Simple to install, lightweight, made of the highest grade Alnico, the Perma-Pulley is backed by over 50 years' experience in the design and manufacture of magnetic separators by Dings for all industry. *Write for catalog.*

DINGS MAGNETIC SEPARATOR CO.
4758 W. ELECTRIC AVENUE
MILWAUKEE 14, WIS.

Dings "HIGH INTENSITY"
*Registered Trade Mark

For more details circle NED-4715 on enclosed inquiry slip

The American Brass Company, Waterbury, Conn., reports:

Plant layout speeded with Kodagraph Autopositive Paper

● The engineering and reproduction departments of The American Brass Company must keep pace with the constant plant-layout demands of ten manufacturing divisions. *And here's how Autopositive Paper saves time and dollars in this work.*

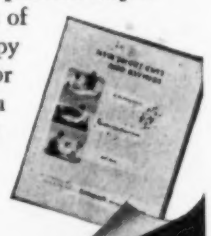
First, paper cutouts of machines and equipment are pasted in position on a whiteprint of the proposed layout. From this opaque pasteup, a positive reproduction on Autopositive Paper is made *directly*. There's no negative step, no darkroom handling with this revolutionary photographic intermediate material. Just expose in a standard whiteprint machine . . . processing in standard photographic solutions.

Then, the Autopositive intermediate—with dense photographic black lines on a durable, evenly translucent base—is used to produce the desired number of prints. These are sent to the branch involved to be studied and returned with comments.

This procedure may be repeated half a dozen times until complete agreement is reached on the final layout. And *every time* revolutionary Autopositive Paper saves time and dollars!

Kodagraph Autopositive Paper
"THE BIG NEW PLUS" in engineering drawing reproduction

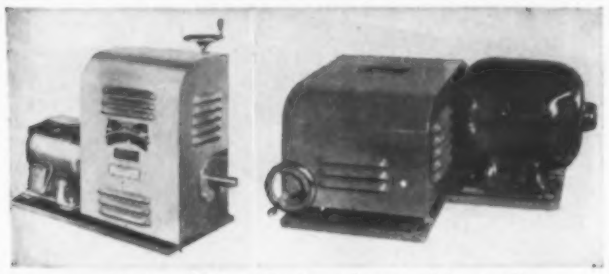
Learn all the ways Kodagraph Autopositive Paper is simplifying routines in thousands of concerns. Write today for a free copy of "New Short Cuts and Savings" for interesting facts about companies you know . . . and a revolutionary new product *you should know.*



EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

For more details circle NED-4716 on enclosed inquiry slip



ALLSPEED upright and horizontal motor-driven units—both use Std. NEMA frame motors.

Instantaneous stepless speed control over whatever range you choose

With a Worthington Allspeed Motor Drive, you vary speed instantaneously and steplessly over exactly the range you need. You select the unit that covers the required range whether it's 2 to 1 (or less) or 16 to 1.

And with Worthington Allspeed's tandem-belt design, you get a *more compact unit, greater speed variation* (where necessary), and *longer life* plus these other features: built-in standard NEMA frame ball-bearing motor . . . provision for mounting in any position, for running in either direction . . . choice of model—upright or horizontal, enclosed or skeleton, with or without motor.

Write for details. Worthington Corporation, formerly Worthington Pump and Machinery Corporation, Allspeed Drive Division, Holyoke, Massachusetts. AS.2.5

WORTHINGTON

Allspeed Drives

▲ For more details circle NED-4717 on enclosed inquiry slip ▲

Machine de-burring with NOBUR pays BIG production dividends!

NOBUR Tools *turn a slow bench operation into fast and efficient machine work!* Remove burrs on multi-walled parts with a smooth, clean cutting action that won't mar highly finished surfaces. Eliminate rejects from slow, costly hand work with files, scrapers and abrasives.

Nobur Tools are used on any lathe, drill press, portable drill or flexible shaft. Operation of the double-edge cutting blade is easy and safe . . . no skilled help is required, and the spindle *never needs to be stopped* for either de-burring or chamfering.

Nobur Tools cut freely on either hard or soft metals, are simple in construction and are made in sizes to cover a full range of hole diameters. ***NEW "DS" SERIES extends range of NOBUR applications to holes as small as 1/8" diameter. WRITE FOR FULL DETAILS TODAY!**

Parts like these quickly de-burred with

NO BUR TOOLS

NOBUR MANUFACTURING COMPANY

719B N. VICTORY BLVD., BURBANK, CALIF.

▲ For more details circle NED-4718 on enclosed inquiry slip ▲

UNIVERSAL

EXPANDED METAL FLOOR TRUCKS

- **Greater Economy**
- **Greater Utility**

MODEL 4-A
Length 60", width 30", height 30".

Literature Mailed Promptly Upon Request

MODEL 4-B
Length 60", width 30", height 48".

Durable, highly maneuverable, economically priced. Designed to meet a wide range of material handling jobs. Rigid angle iron frame. Equipped with four 4" ball-bearing fiber casters—swivel casters centered at front and rear; rigid casters centered on each side. Model 4-B has hinged drop panel on side equipped with positive safety latches.

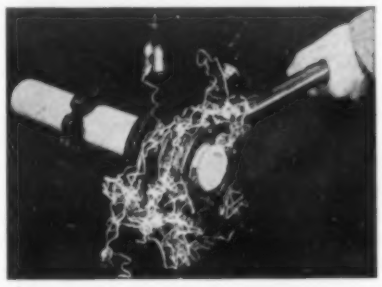
- Also other types of expanded metal containers in sizes and quantites to customer's specifications.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

▲ For more details circle NED-4719 on enclosed inquiry slip ▲

New Processes & Materials

PLASTIC PIPE & TUBE
bar and rod also available



Extreme resistance to corrosion is offered by tubing, bar stock, rods and piping made from B. F. Goodrich Geon 404 polyvinyl chloride. Material can be sawed, drilled, formed, embossed, turned, threaded, welded, ground, milled and rolled. Rigid unplasticized material resists organic and inorganic acids, foodstuffs, alcohol and alkalies. Fabrication can be into valve, pipe fittings, hoods, trays, tanks, fume systems, acidproof floors and wire insulation, among others. Tests show that over 2000 psi is required to burst 1¼-in. pipe. Tensile strength is 8600 psi and specific gravity is 1.35-1.45. Piping is made in ½ to 2-in. sizes with ¼-in. thick walls. Made by **Van Dorn Iron Works Co.**, 2683 E. 79th St., Cleveland 4, O.

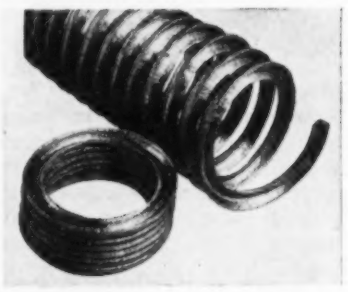
▲ For more details circle NED-4720 on enclosed inquiry slip ▲

HIGH TEMPERATURE CEMENT
has high insulating value

Vats, tanks, pipe and pipe fittings, valves and ovens are among items that can be coated with vermiculite high temperature cement to prevent excessive heat loss and maintain proper temperatures. Vermiculite is a granular material containing millions of small air cells and which has tiny reflecting surfaces which slow the passage of heat. In one application, the high temperature cement made possible the maintenance of temperatures from 350 to 500° F in large industrial vats while an inside coating was baking. Cement was applied in two ⅜-in. layers on the outside of the vats, while the protective phenolic resin was being applied on the inside in several layers. Vermiculite-content material was blown through a gun and was dried by heat from the propane gas burner used inside the vat to dry the resin. Cement made by **Zonolite Co.**, Dept. LS, Room 1263, 135 S. LaSalle St., Chicago, Ill.

▲ For more details circle NED-4721 on enclosed inquiry slip ▲

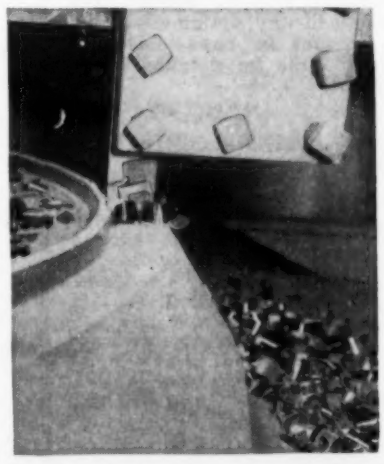
CONTINUOUS V-TYPE PACKING
designed for 500 to 6000 psi



Continuous chevron-type packing known as Continuous-Vee is designed for 500 to 6000-psi service and is available in styles for either high or low temperature. Packing is furnished in sizes from ¼ to 1 in. by 1/16-in. increments, 25 ft per spiral. Style No. 2005, constructed of asbestos cloth and Neoprene, is recommended for high temperature service on reciprocating steam or air rods and hot oil pumps. No. 2008, for lower temperatures, is made of cotton duck and Neoprene and is practical for hydraulic rams and outside packed plunger pumps handling oil or water. Top and bottom adaptors in continuous form are available for both styles. Made by **Flexrock Co.**, Mechanical Packing Div., 3670-B Cuthbert St., Philadelphia 4, Pa.

▲ For more details circle NED-4722 on enclosed inquiry slip ▲

CUTTING CARBIDE
for slow speed machine operations



Where the nature of the metal cutting job makes slow speeds necessary, grade S-6 cutting carbide can be efficiently used. Even though this grade of carbide can be used at high machining speeds, its greatest tool life is obtained at slower speeds. Carbide is especially suitable for use on old or slow speed machines. It is efficient for interrupted cuts and removes stock fast because of heavy feed permissible. Developed by Newcomer Products, Inc. of Latrobe, Pa., carbide is distributed by **Greenleaf Corp.**, Suite 209, 512 Franklin Ave., Pittsburgh 21, Pa.

▲ For more details circle NED-4723 on enclosed inquiry slip ▲

HOUGHTON RUST PREVENTIVES

...OLDEST NAME★ KNOWN IN THE INDUSTRY

★**COSMOLINE** widely used to meet Government Specifications

★**RUST VETO** popular for general industrial use

A wide range developed for varying types of protection for any equipment or parts . . .

- Exclusive "polarized" adherence to metal indoors or out
- Thin film coating stays put till cleaned off
- Easily sprayed or painted on—easy to remove
- Withstands tough exposures—expands and contracts with the metal

WRITE FOR BULLETIN . . . products of

E. F. HOUGHTON & CO.
PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO

Ready to give you on-the-job service . . .

▲ For more details circle NED-4724 on enclosed inquiry slip ▲

GO "AMERICAN" FOR CIRCULAR WELDED PRODUCTS

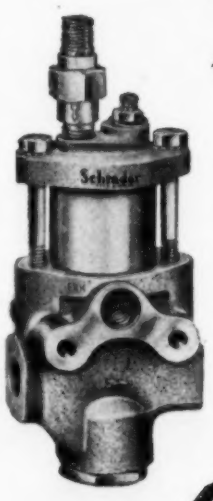
We make rings, bands, components and assemblies by either fusion or resistance welding of ferrous or non-ferrous metals. We believe that our quality is second to none and we know our products are reasonably priced. Many "Blue Chip" companies are our customers. Their products range from fractional horse-power motor shells to jet engine components.

SEND FOR YOUR COPY OF OUR 20 PAGE ILLUSTRATED CATALOG

THE AMERICAN WELDING & MANUFACTURING CO.
WARREN, OHIO

▲ For more details circle NED-4725 on enclosed inquiry slip ▲

Schrader Pilot Valves for Remote Control of Air Systems



From any convenient spot, you can actuate air equipment by means of a Schrader Pilot Valve. Simply install in the main supply line at the point of operation, and add a small actuating valve at the point of control.

Pilot valves are available in two-, three- or four-way types, and can be supplied with timers to deliver air from a fraction of a second to as many as desired.

The Schrader catalog gives complete information on pilot valves, as well as the full Schrader line of air operated products. Write for it today.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Ave., Dept. E-45, Brooklyn 17, N. Y.

▲ For more details circle NED-4726 on enclosed inquiry slip ▲

FEL-PRO offers engineering help ...on GASKETING problems

that extends from DESIGN

and MATERIAL SELECTION

to the FINAL INSTALLATION

FEL-PRO's gasketing service is *complete!* When you call on FEL-PRO you get the benefit of more than 30 years' experience in gasketing skill. You get help in the design of specialized gaskets, help in the selection of a wide variety of gasketing materials to best suit your needs, and finally, help in the proper installation and handling of gaskets and packings. This complete engineering service is your assurance of high performance standards and maximum economy. FEL-PRO invites your inquiries on any gasketing problem.

FELT PRODUCTS MFG. CO. 1510 Carroll Avenue, Chicago 7, Illinois
Warehouses in: Atlanta, Boston, New York, Los Angeles, Oakland, Portland

5887R

FEL-PRO ENGINEERED gaskets
Utilize Newest Materials
Specifically designed for your product

For more details circle NED-4727 on enclosed inquiry slip

COOK!

THE NEW
BAKER TYPE FS
gives you the most material handling you can get for your money in a
2000 POUND FORK TRUCK

Here's Why:

▶ It's BUILT to take PUNISHMENT!
All-Steel welded frame; powerful Baker motors; efficient worm-drive power axle; dynamic-braking, 2-drum, 5-speed, NO Plug controller—all components are of the same basic construction as in our heavy-duty equipment for capacities up to 10,000 pounds.

▶ It's the most MANEUVERABLE Truck in its class!
An FS with 36-inch forks can make a "U" turn in an 8½-foot aisle! It can stack a 48-inch load at right angles to a 10-foot aisle without sacrificing stability.

▶ It's ECONOMICAL!
100% functional design means that every dollar you invest goes to work for you. You save on operating and on maintenance costs. *The FS is always on the job!* By any standard you apply, the FS is the best buy in its class.

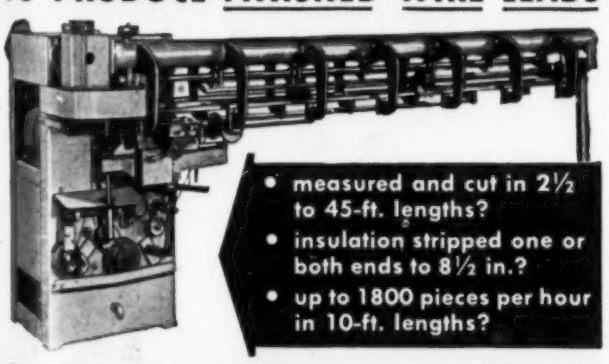
All the features engineered into the outstanding Baker Type FS, 2000-pound Fork Truck are described in an illustrated 8-page specification bulletin. • Write for your copy.

THE BAKER-RAULANG CO.
1245 WEST 80th STREET, CLEVELAND 2, OHIO

Baker INDUSTRIAL TRUCKS

For more details circle NED-4728 on enclosed inquiry slip

Do you need this CAPACITY TO PRODUCE FINISHED WIRE LEADS



- measured and cut in 2½ to 45-ft. lengths?
- insulation stripped one or both ends to 8½ in.?
- up to 1800 pieces per hour in 10-ft. lengths?

Completed Automatically on Artos Model CS-10

Now you can get high production of insulated wire leads... accurately measured, cut in lengths up to 45 ft., and stripped at one or both ends. Leads are finished complete and collected in one fast, automatic cycle.

This Artos machine will handle wire, cord and cable up to No. 10 stranded or No. 12 solid. Consistently uniform results are obtained without cutting strands or nicking solid wire. Insulation may be stripped from 2 in. up to 8½ in. at one end and 6½ in. at the other. You can also slit parallel cord or remove the outer jacket on SJ appliance cords.

Inexperienced help can handle an Artos without trouble. Set-ups are quickly changed for different cut lengths and stripped lengths.

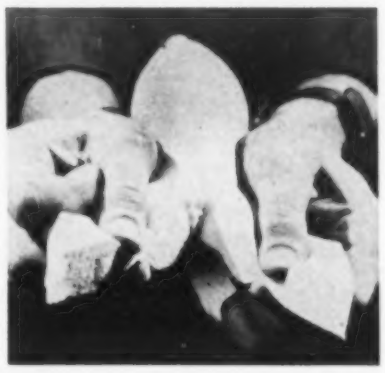
Write for this Free Bulletin
Get the complete story—write now for Bulletin 40 on the Artos Model CS-10.

Automatic Wire Cutting and Stripping
ARTOS ENGINEERING CO.
2751 S. 28th St. • Milwaukee 46, Wis.

For more details circle NED-4729 on enclosed inquiry slip

New Processes & Materials

PLASTIC FOAM SPONGE is flame and chemical resistant



Sponge-like foam made by process of expanding Vinylite plastisol resembles foam rubber but has advantages of high flame and chemical resistance plus ease of fabrication. Easily laminated directly to natural or synthetic textiles and films, foam is available in any color or thickness. Product has high resilience and elasticity, is resistant to oxidizing or hardening and is practically odorless. Cast in lightweight open molds, foam reproduces in fine mold detail without applied pressure and can be formed in sheets, blocks or tubes more than 8 in. in thickness or area. Density can be varied from 12 to 18 lb per cu ft and almost any degree of hardness or softness obtained. Developed by **Elastomer Chemical Corp.**, 117 E. Centre St., Nutley 10, N. J.

For more details circle NED-4730 on enclosed inquiry slip

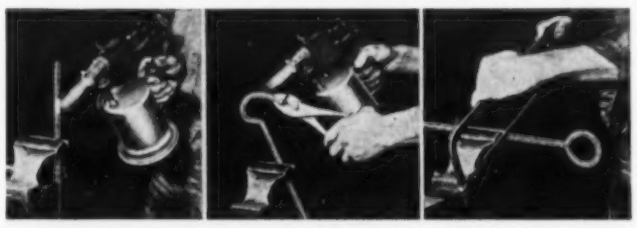
SQUARED LAYOUT PAPER speeds layout and design operations

Reduction in layout time and improved accuracy in design work are possible with Square-Up layout paper. Originally developed for use by metal sign contractors, this material is finding widespread application in industry for layout of patterns and templates. This heavy Kraft paper is imprinted with dotted lines indicating both 6-in. and 1-in. squares. Small dots permit measurements in increments of ¼-in. Roll containing 1000 ft 49 in. wide has price of $21.50. Made by **Barrows Porcelain Enamel Co.**, 2205 Langdon Farm Rd., Cincinnati 13, O.

For more details circle NED-4731 on enclosed inquiry slip

THREADED STEEL ROD offered in six diameters

Supplied in 36-in. lengths and in ¼, 5/16, ⅜, ½, ⅝ and ¾-in. diameters, Redi-Bolt threaded steel rod is precision threaded full length. It is of cold-drawn steel, and spe-



cial coating protects it against rust. It can be cut to any desired length, heated and bent to desired shape or used as tie rod or other fastening. Made by **Redi-Bolt**, P. O. Box 6102, Chicago, Ill.

For more details circle NED-4732 on enclosed inquiry slip

Slash Repair and Maintenance Costs with the CIRCO HEAVY DUTY STEAM CLEANER

For Cleaning:
Equipment, Machinery, Floors, Walls, Building Interiors and Exteriors, Parts, Tools, Windows, Skylights, Freight Cars, Lavatories, Motor Cleaning and Stripping Paint.

The answer to your tough plant housekeeping, production and parts cleaning jobs is the CIRCO Steam Cleaner. DIRT, grease, grime—NOTHING—can resist the powerful blast of wet or dry steam. Into the steam is injected a cleaning compound which aids in the rapid removal of grease, dirt, paint, etc.

Cleans faster than other methods. Reduces fire hazards. Cuts repair and maintenance time. Quiet operation. The CIRCO Steam Cleaner costs little to operate—Fully automatic. No special skill required. Portable and stationary models.

Manufactured by WRITE FOR Bulletin 521
TOPPER EQUIPMENT COMPANY
24-36 MAIN STREET • MATAWAN, NEW JERSEY
Offices in principal cities 1772

PER-SOLV (Perchlorethylene) • CIRCO-SOLV (Trichlorethylene)
"CIRCO" VAPOR DEGREASERS • METAL PARTS WASHERS • DRYERS
SOLVENT RECOVERY STILLS • STEAM CLEANERS

For more details circle NED-4733 on enclosed inquiry slip

Globe Loading Lift

Speeds Loading and Unloading

Trucks, trailers, railway cars, and cargo planes can be loaded faster and at lower cost with a Globe Loading Lift. What's more, material can be handled with less risk of damage to cargo or injury to workers.

The Globe Loading Lift is a simple elevating platform that eliminates the need for ramps, gangplanks, and "muscling" of cargoes. Platform recesses into floor or driveway in "down" position. Accurate control makes for easy flush-leveling to keep goods moving on an even plane.

GIVE YOUR BUSINESS A LIFT!

A Globe OILIFT will help you make the most of your manpower... speed production, save you money, help eliminate damage to materials and injury to workers. Write *today* for valuable information on Self-Leveling Ramps, Machine Loading Lifts, Industrial Truck Service Lifts, Production Lifts, etc. Ask for Bulletin NE-416.

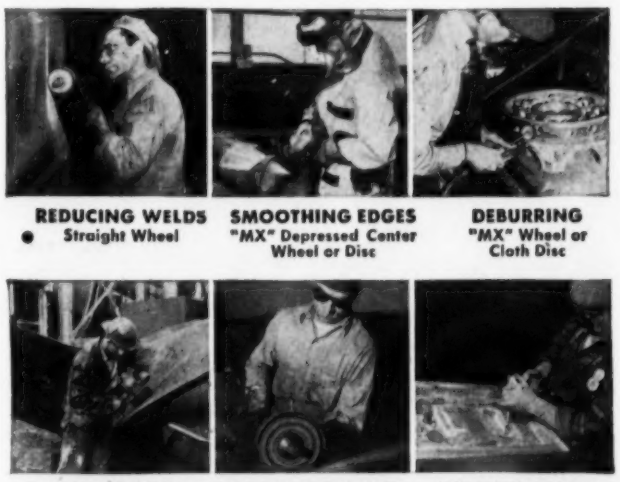
GLOBE HOIST COMPANY • 1000 E. Mermaid Lane, Phila. 18, Pa.
Factories at Des Moines, Iowa, and Philadelphia, Pa.

For more details circle NED-4734 on enclosed inquiry slip

ONE SOURCE

...for EVERY TYPE of abrasive in high-speed PORTABLE GRINDING...

...used on EVERY TYPE of portable grinding operation in metalworking...



...more proof that only CARBORUNDUM TRADE MARK offers ALL abrasive products ...to give you the proper ONE

"Carborundum" and "MX" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, N. Y.

81-67

For more details circle NED-4735 on enclosed inquiry slip

BETTER POWER TRANSMISSION

Whenever you require a reduction in speed between any prime mover and a driven machine, there is a Foote Bros. drive exactly suited to your needs.

The Foote Bros. line includes horizontal and vertical drives in either helical gear or worm gear types. Also available are Foote Bros.-Louis Allis Gearmotors in single, double and triple reductions. Call your Foote Bros. representative or write for information.

SEND FOR BULLETINS
HGA { Horizontal Worm Drives / Vertical Worm Drives / Hytop Worm Drives
LPB Line-O-Power Straight Line Drives
MPB Maxi-Power Helical Drives
GMA Foote Bros.-Louis Allis Gearmotors

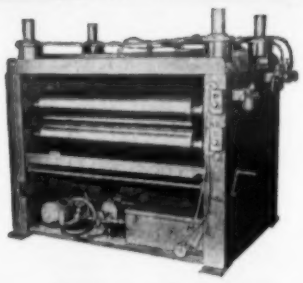
FOOTE BROS. GEAR AND MACHINE CORPORATION
Dept. NE, 4545 S. Western Boulevard
Chicago 9, Illinois

FOOTE BROS.
Better Power Transmission Through Better Gears

For more details circle NED-4736 on enclosed inquiry slip

UNION AUTOMATIC COMPOUND SPREADERS

SAVE *8 WAYS



1 "Die life increased 75%."
2 "Production increased 20%."
3 "Compound saving of 16%."
4 "Rejects reduced 10%."
5 "One helper eliminated."
6 "Paid for itself in 54 days."
7 "Able to use salvage stock for some operations."
8 "25,000 more pieces before changing dies."

MODELS TO FIT ANY STOCK UP TO 96" WIDTH

Union is the foremost designer and manufacturer of roller coating machines for application of drawing or stamping compounds and protective coatings.

Models may be equipped with hardened steel, or with neoprene-covered rolls—also with heated or cooled rolls—to meet your individual requirements.

*The above claims are based on actual statements by users, both large and small—a number of whom have ordered a second and third machine.
Complete data and agent's name on request. Union will design and/or manufacture coating machines to meet your specific requirements.

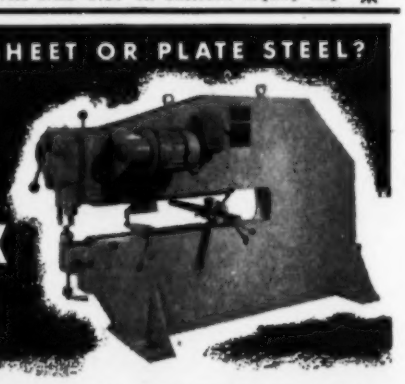
UNION TOOL CORP.
314 E. MARKET ST., WARSAW, IND., U.S.A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

For more details circle NED-4737 on enclosed inquiry slip

WORKING SHEET OR PLATE STEEL?

LOOK at what PULLMAX CAN DO



STRAIGHT CUTTING

Straight cutting, circle cutting, free hand cutting, slot cutting, beading, folding, louvering and many variations of these operations... ALL ON ONE PULLMAX MACHINE! Easy to set up and change tools... seven sizes of machines work materials up to 11/32" in mild steel... also works stainless steels, non-ferrous metals, wire mesh and plastics.

CIRCLE CUTTING
WRITE FOR LITERATURE
FOLDING
SLOT CUTTING
BEADING
FREEHAND

PULLMAX—A complete sheet and plate working shop in one machine.

AMERICAN PULLMAX CO., INC.
2457 N. SHEFFIELD AVENUE, CHICAGO 14, ILLINOIS

For more details circle NED-4738 on enclosed inquiry slip

New Processes & Materials

CUSHION PACKING MATERIAL protects fine instruments from jolts

Delicate equipment and instruments can be protected in shipment from the hardest jars and jolts by Celluliner, a cushioning type protective wrapping material. Wrapping serves to protect radar and range-finding equipment parachute-dropped to combat troops. In tests, double-thick layer of material protected from breakage raw eggs dropped from 25-ft height. By varying manufacturing process, Celluliner can be made highly absorbent, for wrapping containers of liquid, or nonabsorbent and moistureproof. It can also be mildew-proofed and flameproofed and will not tarnish, corrode or chemically alter wrapped product. In insulation tests, a 1-in. thick square of material transmitted no heat from oxy-acetylene torch played on surface. It is available with paper, tissue, cloth and plastic type outer coverings. Made by **Gilman Brothers Co.**, Gilman, Conn.

For more details circle NED-4739 on enclosed inquiry slip

THERMOPLASTIC COMPOUND retains strength at low temperatures

Kralastic J thermoplastic molding and extrusion compound retains its toughness and high impact strength at temperatures as low as −60° F. A styrene copolymer, it can be used in military applications where a plastic with low temperature strength is required. Applications include equipment for Arctic use and in aircraft which reach low temperatures at high altitudes. Made by **United States Rubber Co.**, Naugatuck Chemical Div., Naugatuck, Conn.

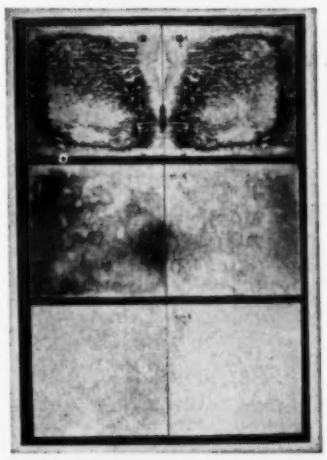
For more details circle NED-4740 on enclosed inquiry slip

TANK COATING PASTE protects against corrosion

Easily applied with hand trowel in any desired thickness, putty-like plastic paste serves to protect outside surfaces of plating rinse tanks from acid spillage, plating salts and other corrosive chemicals. Compound is made by adding gelling agent to paste based on B. F. Goodrich Geon 121 vinyl resin. It also has good resistance to oils, greases, abrasion and aging. Fusing the coating is done either by oven baking or infrared lamps which brings it to Durometer A hardness of 90-95. Because it contains no volatile materials, coating can be applied safely, and there is no change in viscosity during storage. Formulated by **Munray Products, Inc.**, 12401 Crossburn Ave., Cleveland 11, O.

For more details circle NED-4741 on enclosed inquiry slip

PROTECTIVE PAPER prevents water stain of aluminum

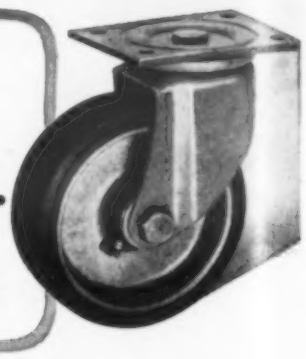


A chemically treated interleaving tissue paper not only serves as cushion to prevent abrasion of aluminum flat sheet products, but it also eliminates the water staining which takes place between stacked sheets of most metals and many nonmetals. Water staining usually follows sharp changes in temperature when condensation is formed and drawn between the sheets of stacked metal. Inhibitor in paper prevents corrosion.

Illustration shows three pairs of test packs of aluminum sheet. Two top pieces had no paper between them. Center two were interleaved with ordinary paper. Bottom two, which are unstained, were interleaved with sodium chromate impregnated tissue. All test packs were exposed to high humidity for 30 days while tightly bound with aluminum wire. Paper developed by **Kaiser Aluminum & Chemical Corp.**, 1924-N Broadway, Oakland 12, Calif.

For more details circle NED-4742 on enclosed inquiry slip

NEW! Carries up to 1,400 lbs. ...yet lighter, less expensive



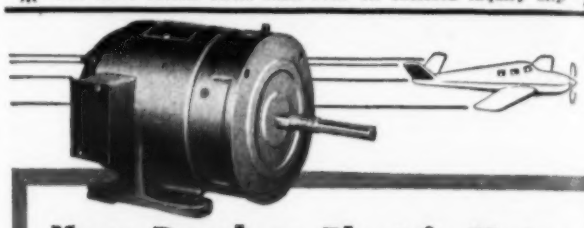
This new super 8 in. Bassick Caster Series "SK-99" meets medium-heavy duty needs with less weight and less cost than ever before available.

All the famous Series "99" features are packed in this new addition to the line . . . ¼ in. thick steel top plate; extra-heavy king pin; full-floating, double ball race construction; fully-hardened bearing surfaces, etc.

Put it to work *now* to reduce the "Reducible 30%" (materials-handling...about 30% of total cost...one of today's few *reducible* expenses). Write for descriptive leaflet, form 99-51. THE BASSICK COMPANY, Bridgeport 2, Conn. *In Canada:* Belleville, Ont.

Bassick
A DIVISION OF STEWART SW WARNER
MAKING MORE KINDS OF CASTERS...MAKING CASTERS DO MORE

For more details circle NED-4743 on enclosed inquiry slip



Your Peerless Electric Motor Department can serve you promptly

• One of the finest motor engineering staffs can be your motor department when you call on Peerless Electric.

Peerless private air service—a Beechcraft Bonanza—can carry one of our sales engineers to see you on reasonably short notice, if necessary. He'll get to your problem quickly—right at your desk with your own designers—ready to work out the toughest motor problem.

Peerless Electric motor engineering, noted for dependability and versatility since 1893, is as progressive as the modern age, and now, more than ever, available as the motor department of your business.

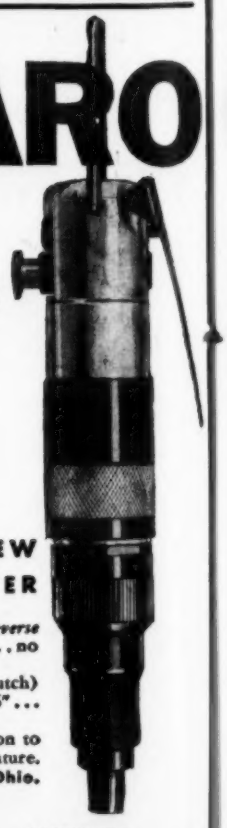
THE PEERLESS ELECTRIC CO., WARREN, OHIO
Manufacturers of Quality Motors Since 1893
Single Phase • Polyphase • Direct Current • ¼ to 15 H.P.

Peerless Electric MOTORS · FANS · BLOWERS

For more details circle NED-4744 on enclosed inquiry slip

Another FIRST by ARO

Instant PUSH-BUTTON Reverse



A REVOLUTIONARY SCREW DRIVER AND NUT SETTER

ARO's new push-button valve means *instant reverse action*... no need to remove from work... no stopping to turn levers... no wasted time.

Adjustable clutch (available with positive clutch) Length 7-11/16"... outside diameter 1-5/16"... weight 1.4 lb.

This outstanding tool must be seen in action to appreciate its amazing action. Write for literature.
The Aro Equipment Corporation, Bryan, Ohio.
Aro Equipment of Canada, Ltd., Toronto

ARO AIR TOOLS Also... LUBRICATING EQUIPMENT...HYDRAULIC EQUIPMENT...AIRCRAFT PRODUCTS... GREASE FITTINGS

For more details circle NED-4745 on enclosed inquiry slip

Name your brush need

Automotive
Aviation
Industrial
Fractional hp

Speer can meet it!

Have a brush problem? Speer makes over 100 different grades to meet every application. Extruding, molding, baking, finishing, application testing . . . every step is carefully controlled in Speer's own plants to make certain you get the maximum in brush effectiveness. For more details:

Write today for our free booklet "Speer Carbon Products"

A Speer application-tested brush for every use:
motors • rotary converters
generators • power tools
subways • ignition systems
starters • power plants
Diesel locomotives
windshield wipers
accounting machines
household appliances

SPEER Carbon Co.
St. Marys, Pennsylvania
SUBSIDIARIES:
Jeffers Electronics, Inc. Speer Resistor Corp.
International Graphite & Electrode Corp.

For more details circle NED-4746 on enclosed inquiry slip

For Safety's Sake Use
DAYTON SAFETY LADDERS

Maintenance men everywhere rely on Dayton Safety Ladders for maximum safety and convenience. Daytons are constructed of tested airplane spruce and reinforced with rigid steel supports to give great strength and lightness of weight.

Handrails of steel guard the large roomy platform for added safety. Half of platform can be raised to form an extra step, when needed. These famous ladders can be set up instantly, are easy to carry and fold compactly for storing. Automatic locking feature insures safety while ladder is in use.

Sizes 3 feet to 16 feet in height (measured from ground to platform) with standard rubber safety shoes at no extra cost.

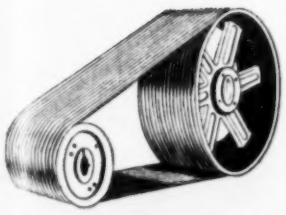
Write today for Bulletin No. 10

DAYTON SAFETY LADDER CO.
2339 GILBERT AVE. CINCINNATI, OHIO
In Canada—Safety Supply Company—Toronto

For more details circle NED-4747 on enclosed inquiry slip

CONGRESS SHEAVES and V-BELTS

- Precision built. Soundly engineered. Widely used as original equipment by hundreds of the largest manufacturers of such appliances as washing machines, dryers, laundry equipment and air conditioning installations.
- Congress FHP pulleys are available in attractive 3-color individual boxes, with pulley outside diameter and bore size plainly marked. Simplifies storing-selling.



Immediately Delivery From Stock

WRITE FOR CATALOG

CONGRESS DIAMOND BORED DRIVES
3750 E. OUTER DRIVE, DETROIT 34, MICH.

For more details circle NED-4748 on enclosed inquiry slip

New Processes & Materials

PRESSURE-SENSITIVE LABELS stick firmly to crackle finish

Labels made from acetate plastic tape stick without moistening, accept print extremely well and are available in wide variety of colors and widths. Tape's pressure-sensitive adhesive makes it a practical labeling material for metals, materials and finishes to which ordinary gummed labels do not adhere satisfactorily. It is resistant to dirt, water, grease, oil and acids, stays clean and will remain firmly applied over temperature range of −40° to 250° F. Illustration shows label designed for Jet Pac tire inflator. Made by **Labelon Tape Co.**, 20 Greenleaf St., Rochester 9, N. Y.

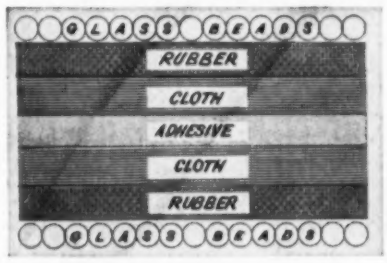
For more details circle NED-4749 on enclosed inquiry slip

SILICONE-ALUMINUM PAINT withstands corrosion, high heat

Protection against corrosion, deterioration and weathering at temperatures up to 1000° F can be provided by Lankote 705 silicone-aluminum paint. Developed for application to smokestacks, furnace walls and other items subjected to high heat, the paint can be applied by brush or spray. Samples of paint, used primarily for maintenance, are available. Made by **J. Landau Co.**, Lankote Div., Dept. NED, 221 Wooster St., New York 12, N. Y.

For more details circle NED-4750 on enclosed inquiry slip

GLASS BEADED FABRIC has wide industrial possibilities



Offering a wide variety of possible applications Sherekote beaded fabric consists of two sheets of oil-resistant material laminated back-to-back and coated with millions of microscopic glass spheres on each side. Inner lining of cloth and rubber compresses to provide uniform friction and tightness in use. Thickness is approximately 55 mils. Washers made of the material and tested between folding joints of car's convertible top showed very low coefficient of friction, evenly distributed pressure and no evidence of scoring. Material can be used with or without lubricant. Samples measuring 4 x 6 in. can be obtained upon request for experimental purposes. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

For more details circle NED-4751 on enclosed inquiry slip

SPRAY NOZZLES... two guides to proper selection!

No matter what you may face in the way of a spraying problem, it can be solved quickly and at low cost with Spraying Systems Spray Nozzles. Two fact-packed catalogs—No. 22, General Industrial Spray Nozzles, and No. 23, Pneumatic Atomizing Nozzles—are yours for the asking. They show you all the various types of spray nozzles available . . . explain design and construction . . . and outline spray characteristics such as atomization, impact of spray and capacity. Write for your copies today.

SPRAYING SYSTEMS CO.
ENGINEERS AND MANUFACTURERS
3211 RANDOLPH STREET BELLWOOD, ILLINOIS

WRITE FOR CATALOGS NO. 22 AND NO. 23

For more details circle NED-4752 on enclosed inquiry slip

Something NEW! Volatile Solvent

CARBON MET

A HALOGENATED AROMATIC HYDROCARBON

A specific replacement for toxic Carbon Tetrachloride

Out and out metal dry cleaning solvent and degreaser in ready-to-use "Handy Kit" containing Patented dip and drier basket.*

U. S. PAT. 2318842

- Quick Cutting solvent against stubborn dirt and grease.
- Non-Explosive and relatively non-toxic.
- Non-Corrosive to metals. • Fast, clean evaporation.
- Non-Ionic . . . ideal for degreasing and cleaning electrical parts.

MUCH FASTER CUTTING THAN "CARBON TET" . . . CAUSES NO RUSTING . . . LEAVES NO FILM

*also economical 55 gal. size drum kit.

Sold by industrial jobbers everywhere. Shipped *"Prepaid"* Express, if your jobber is out of stock.

IMMEDIATE DELIVERY 1 GALLON OR A TANK CAR

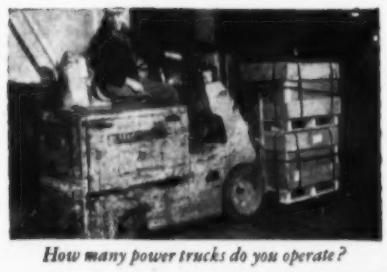
CURRAN CORP. Mfg. Chemists LAWRENCE, MASS

120 South Canal St.

For more details circle NED-4753 on enclosed inquiry slip

B.F. Goodrich

Extra-heavy loads to handle?



How many power trucks do you operate?

Use hand trucks in your plant?

TW ANALYSIS saves you up to 50%

YOU can cut tire and wheel costs up to 50% on any materials handling job by using the right type, size and tread compound and following our suggestions. Proper maintenance alone cuts costs 10% to 20%. Let a trained B. F. Goodrich Tire and Wheel Analysis man look over your operations. Without charge or obligation he'll make impartial recommendations—impartial because only B. F. Goodrich makes industrial tires to meet *every* requirement.

Use the coupon for complete information on this new Tire & Wheel Analysis Plan.

A similar plan is available for manufacturers of industrial hauling equipment.

The B. F. Goodrich Co.
Department TW-174
Akron, Ohio
Please give me additional information on your new Tire and Wheel Analysis plan.
Name_____
Title_____
Company_____
City_____ State_____

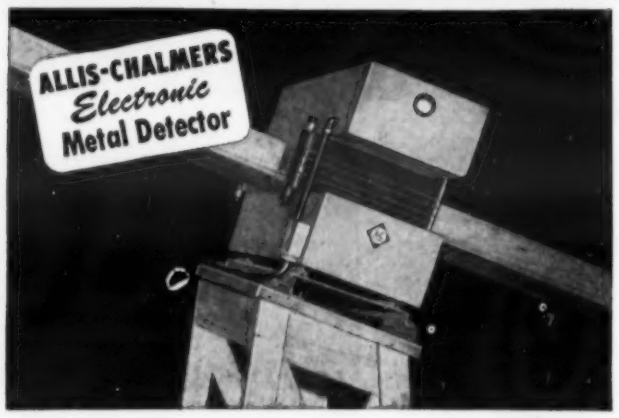
RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

BFG dealers sell and service a complete line of industrial tires.

For more details circle NED-4754 on enclosed inquiry slip

MACHINE PRODUCTS CORPORATION
6763 E. McNichols Road • Detroit 12, Mich.

▲ For more details circle NED-4755 on enclosed inquiry slip ▲



ARE YOU SURE IT'S PURE?

CAN YOU BE SURE no metal particles are getting into your packaged food? Magnets can't stop lead or brass or aluminum. The answer is, you *can't* be sure — without an Electronic Metal Detector. There's no other practical way!

Best of all, Allis-Chalmers Electronic Metal Detectors fit production set-ups. For example, conveyor belts from packaging machines can carry packages through the aperture of the detector at 15 to 600 fpm. Unit compares in upkeep and operating cost with a household radio. Latest design minimizes maintenance.

Call your nearby Allis-Chalmers Office for complete information, or write Allis-Chalmers, Milwaukee 1, Wisconsin.

A-3711

ALLIS-CHALMERS A-C

▲ For more details circle NED-4756 on enclosed inquiry slip ▲

Meet those Exacting Requirements!

with RYNEL GEARS

Complete Facilities for
NAVIGATION
COMMUNICATION
AIRCRAFT
ELECTRONIC
Gear Requirements

Specialists in Fine Pitch Gears
Where Precision Specifications Are A "Must"
Design Engineering
High Volume Supply
Bar Stock To Finished Gears
Precision Inspection

RYNEL ENGINEERS can be in your plant the same day you call.

Send Blueprints for Quotation, or Telephone for Consultation.
Telephone
STerling 4440

RYNEL CORPORATION
302 MILLER STREET • STERLING, ILLINOIS
SPUR • HELICAL • WORM • WORM GEAR • INTERNAL SEGMENT • SPROCKET • RATCHET • STRAIGHT BEVEL GEARS

▲ For more details circle NED-4757 on enclosed inquiry slip ▲

New Processes & Materials

GAUZE TAPE
sticks only to itself

This combination gauze and tape bandage offers protection from bruises, skin burns and other injuries. It is easily and quickly applied on fingers and is easily removed, leaving no gummy deposit on the skin. Soft and flexible, it does not reduce finger sensitivity when handling small, thin parts. It is oil resistant and does not loosen in water. Protection is also offered for those handling rough, sharp, hot or abrasive materials. Made by **Modern First Aid Necessities Co.**, Dept. NED, 737 W. Randolph St., Chicago, Ill.

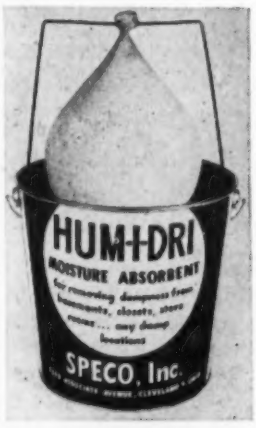
▲ For more details circle NED-4758 on enclosed inquiry slip ▲

GLARE REDUCING GLASS
minimizes transmission of heat

Designed to provide filtered daylight for commercial, industrial and institutional buildings, Aklo Fine-tex is a patterned glass that has heat absorbing and glare reducing properties. Glass will be supplied in ⅛ and ¼-in. thicknesses as well as in ¼-in. wired form for skylights and fire retardant glazings. For maximum eye comfort, it is supplied with frosted finish. It filters out three times as much sun heat as ordinary glass of same thickness, according to tests. Developed by **Libbey-Owens-Ford Glass Co.**, Dept. NED-52, Nicholas Bldg., Toledo 3, O.

▲ For more details circle NED-4759 on enclosed inquiry slip ▲

MOISTURE ABSORBENT
removes dampness from air



Locations subject to excessive moisture, such as basements, closets and store rooms, can be kept relatively dry with Hum-I-Dri, a moisture absorbent made in activated pelletized form. Product removes from the air up to ten times its weight in moisture without requiring frequent baking or drying out, and is especially recommended for plant or hotel kitchens, food processing plants, laundries and other industries subject to steam and moisture. It is furnished in 10-lb size with heavy galvanized drip pail and in 5-lb size with smaller painted pail. Wire standard fits into top of pail and holds absorbent suspended, permitting air to circulate completely around it. Developed by **Speco, Inc.**, Dept. RSA, 7308 Associate Ave., Cleveland 9, O.

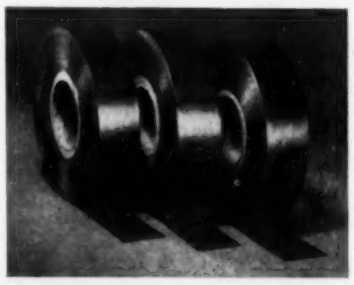
▲ For more details circle NED-4760 on enclosed inquiry slip ▲

WIRE INSULATING COMPOUND
for —60° to 120° C temperature uses

Wire insulating compound suitable for operating temperatures from −60° to 120° C is designated as HLT 500. In test, samples have been aged at 150° C for seven days with very little effect on electrical and physical properties. Wires insulated with compound are available for high temperatures and baking operations such as in transformer leads, motor leads, coil and relay leads and for confined areas where excessive temperature build-up is problem. Developed by **Chester Cable Corp.**, 523 Fifth Ave., Chester, N. Y.

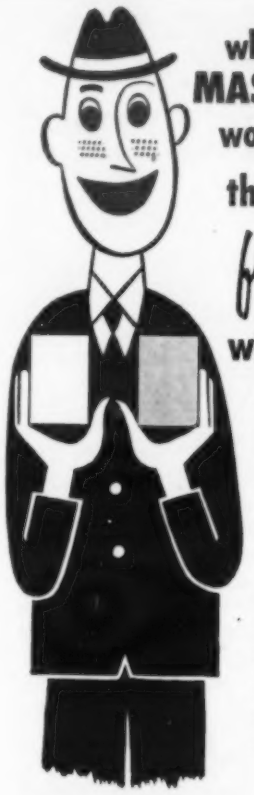
▲ For more details circle NED-4761 on enclosed inquiry slip ▲

PLASTIC TAPE
has good chemical resistance



Temflex 105 calendered tape has good chemical resistance and unusual dielectric strength, as well as high tensile strength for more effective use on taping machines. Inasmuch as it resists oil, it can be used on transformers or diesel equipment. Although the tape is not easily stretched, it possesses good ultimate elongation. Thickness is uniform, thereby eliminating internal stresses. Made by **Irvington Varnish & Insulator Co.**, Dept. NED, 6 Argyle Terrace, Irvington 11, N. J.

▲ For more details circle NED-4762 on enclosed inquiry slip ▲



which MASONITE PRESDWOOD works best in your product?

this free booklet! will help you!

Why guess? "A Guide for Product Designers" tells you all about the 39 types and thicknesses of Masonite Presdwood.® Chock-full of facts you want to know about these tough, durable, all-wood hardboard panels now boosting quality and cutting costs in so many industries. Send for your free copy today. Our engineers are at your service, too, for the knotty problems.

BETTER HARDBOARDS FOR BETTER PRODUCTS

MASONITE® CORPORATION
DEPT. NED-5, BOX 777, CHICAGO 90, ILL.
"Masonite" signifies that Masonite Corporation is the source of the product

▲ For more details circle NED-4763 on enclosed inquiry slip ▲

DETECTO SCALES

There's a precision-accurate Detecto Scale for your specific weighing and counting need. The Detecto helps increase production, yet assures you maximum accuracy by making slightest weight discrepancies immediately visible.

No. 1800 DETECTO-GRAM INDICATOR HEAD

One more Detecto weighing instrument to speed production. This attachment converts your present beam scales to accurate weighing equipment. Indicator stops instantly at correct weight.

Write for Literature

DETECTO SCALES • INC.
MAKERS OF FINE SCALES SINCE 1900
541N PARK AVE. • BROOKLYN 5, N.Y.
SCALE ENGINEERS IN ALL PRINCIPAL CITIES

▲ For more details circle NED-4764 on enclosed inquiry slip ▲

GET IN THE SCRAP

Send for this new booklet —it tells how you can help out in the emergency facing the nation.

Many thousands of manufacturing plants now face serious shortages of steel and products made of steel.

Unless the steel mills and foundries get more *scrap* iron and steel, it will be impossible to meet current demands for both military and civilian production.

You have the needed scrap—in the form of "idle" iron and steel: obsolete machinery, no-longer-usable jigs and fixtures, chain, gears, pulleys, pipe, etc.

Set up a Scrap Salvage Program in your plant* and help keep the steel coming! Non-ferrous scrap is needed, too!

SCRAPPY SAYS: AID DEFENSE MORE SCRAP TODAY... MORE STEEL TOMORROW

*For copy of "how-to-do-it" booklet, address Advertising Council, 25 W. 45 St., New York 19, N. Y.

NEW EQUIPMENT DIGEST

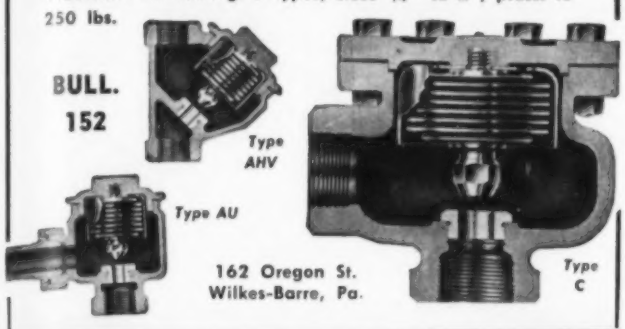
▲ For more details circle NED-4765 on enclosed inquiry slip ▲

Leading Plastic Molders

CHOOSE 'FLEXIBLE' NICHOLSON TRAPS

Because there is no need to change valves for varying operating pressures with Nicholson steam traps, they were recently adopted as standard by a large plastic molding firm. In addition to this flexibility, Nicholson traps offer these other advanced features: operate on lowest temperature differential; 2 to 6 times average drainage capacity; maximum air venting. 5 types; sizes 1/4" to 2"; press. to 250 lbs.

BULL. 152



162 Oregon St.
Wilkes-Barre, Pa.

W. H. NICHOLSON & CO.

TRAPS · VALVES · FLOATS

For more details circle NED-4766 on enclosed inquiry slip

ENAMELSTRIP

STEEL · ALUMINUM · BRASS · PRE-FINISHED COLOR COIL

assures a perfect finish before fabricating

You can easily cut production time and cost with Enamelstrip, the continuous-feed, pre-colored metal coil. Leading manufacturers of metal products are using it with outstanding results in a wide variety of items. Enamelstrip's exclusive, flexible finish withstands the stresses of drawing, bending and forming without cracking or peeling. Many companies have entirely eliminated their finishing departments! Any metal in any finish will be coated and slit to your own specifications.

Write TODAY for detailed color bulletin.

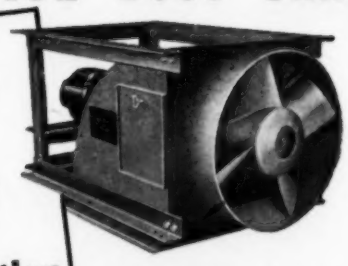
THE COATED COIL CORPORATION
507 West 30th Street, New York 1 • LOngacre 5-3161

For more details circle NED-4767 on enclosed inquiry slip

Wing

ELBOW TYPE DUCT FANS

Delivers Large Air Volumes with Low Power Consumption



Complete range of sizes from 10 in. to 60 in.; and from 200 to 85,000 c.f.m.

The Wingfoil Axial Flow Duct Fan, in either elbow type or straight line type, is a compact, economical fan designed to operate against static pressure. The elbow type replaces an elbow in a run of duct, with the motor outside the housing, unaffected by hot or dirty air or gases. Belt or direct drive. Wingfoil "Non-overloading" fan wheel characteristics. Write for bulletin.

L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey

For more details circle NED-4768 on enclosed inquiry slip

New Processes & Materials

VAPOR-SEAL DUCT INSULATION prevents condensation in ducting

Moisture condensation on air conditioning ducts that carry cool air in warm, humid areas is prevented by Fiberglas vapor-seal duct insulation. This material encloses duct in thermal insulation that has built-in vapor barrier of asphalt and kraft paper. Material can be applied in single operation, has high insulating value and is furnished in 24 x 48 in. panels. Thicknesses of 3/4, 1, 1 1/2, and 2 in. are offered. Insulation can be cut easily and accurately to any shape. Made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

For more details circle NED-4769 on enclosed inquiry slip

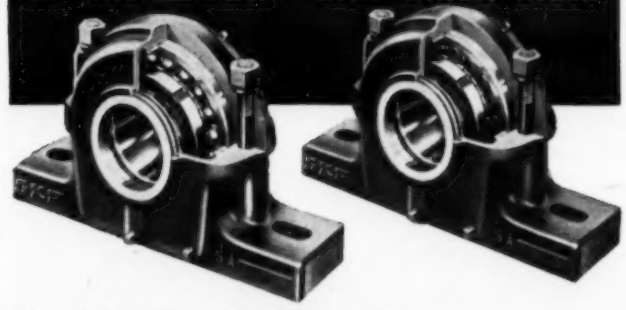
IMPACT-RESISTANT PLASTICS are dielectric, resist chemicals and easy to mold, extrude and machine

Strength is given to molded parts with thin cross sections and extrusions in thin sheets by high impact resistant plastics, made in three grades. Each is easy to mold, extrude and machine, and combines good electrical properties with the chemical resistance of Bakelite styrene plastic. This material, modified with rubber, is the basic formulation for the plastics. Each grade varies slightly in the degree it includes these properties.

QMS-155 is extruded in sheets about 0.025-in. thick and is tough and flexible as it comes from the extrusion die. It resists moisture, tearing and most chemicals and is easy to post-form, swedge or blow into large shapes. QMS-152 can be used for pipe and fittings as it resists abrasion, aging and weathering. Machine and threading of pipe can be done on the job. QMS-151 is extruded in large pieces with thin cross sections, such as used for refrigerator door liners. It has best moldability of the three grades. All three materials can be molded in conventional molding equipment and retain their toughness at −5° F. Made by **Bakelite Co.**, Dept. NE, 122 E. 42nd St., New York 17, N. Y.

For more details circle NED-4770 on enclosed inquiry slip

DIRT'S NO PROBLEM for the SKF "SAF" Pillow Block

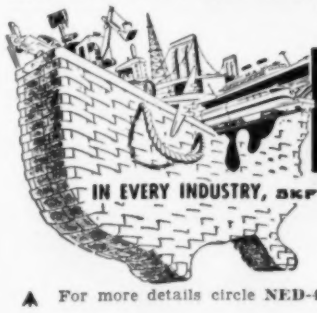


The "SAF" Pillow Block is SKF's answer to dirt problems:

- triple-seal rings give three-fold protection in dirt-gathering locations; seal out foreign matter; seal in oil or grease; self-aligning.
- special stabilizing rings between housing shoulder insure fixed position of shaft in bearing during operation.
- types for light, normal and heavy duty.

7351

Write SKF Industries, for complete details, or contact your SKF Distributor. SKF INDUSTRIES, INC., PHILADELPHIA 32, PA. —*manufacturers of* SKF *and* HESS-BRIGHT *bearings.*



SKF BALL AND ROLLER BEARINGS

IN EVERY INDUSTRY, SKF Puts The Right Bearing In The Right Place

For more details circle NED-4771 on enclosed inquiry slip

Here's a Husky "He-Man" AIR COMPRESSOR for Industrial Service

Westinghouse Air Brake Company "CMB"

Handles tough assignments—designed for continuous operation at 150-lb. max. Two low-pressure, one high-pressure cylinders, forced-feed lubrication system with "metered" oil flow. Automatic—may be arranged for "start and stop" or "continuous-running—load-unload" operation. Displacements 126 to 203 C.F.M., Motor HP 20 to 40. Catalog 9302-7; ask for it.

WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.
INDUSTRIAL PRODUCTS DIVISION

For more details circle NED-4772 on enclosed inquiry slip

Having Conveying Trouble of ANY KIND?

If you convey anything that's *hot, sharp, powdered, oily, abrasive, sticky, wet, stringy or granulated,* investigate this new conveyor.

Self-cleaning Natural-Frequency Conveyors have taken on some of the toughest, roughest, hard-to-handle products in America—are now conveying them smoothly, quickly and efficiently, *with an absolute minimum of wear, tear, maintenance and down-time!*

These spectacular new conveyors work on a unique vibrating principle which substitutes the natural resonance action of rugged coil springs, for brute force. Where up to 90% of the power output of a "brute-force" conveyor may be required to operate its moving parts—and only about 10% to convey its load—substantially no more power is required to *operate the Natural-Frequency Conveyor, empty, than to run the motor alone!*

Bulletin 106 will bring you all the facts about Carrier Natural-Frequency Conveyors, including vertical vibrating spiral elevators. *Write today!* Carrier Conveyor Corporation (formerly Whitley-Carrier Co.) Frankfort Avenue at Clifton, Louisville 6, Kentucky.

CHECK THESE ADVANTAGES!

LESS POWER REQUIRED
(1000 foot-tons per hour per H.P.)

LESS MAINTENANCE & DOWN-TIME
(Less power + good design = good service)

GREATER CAPACITY
(From a dribble up to 200 tons per hour)

HIGH CONVEYING SPEED
(Up to 100 feet per minute, on flat hauls)

NO DAMPENING UNDER LOAD
(Designed with extra power for specified load, with positive stroke)

SELF-CLEANING
(Continuous smooth trough — no pockets)

SCREENS, DEWATERS, SEPARATES, BLENDS, DRIES, COOLS
(Combines processing with conveying)

WIDTHS FROM 6" TO 48"; LENGTHS FROM 5' ON UP
(With pans 16 gauge to 1/2" plate or heavier, open or enclosed)

BALANCED, VIBRATION-FREE UNITS AVAILABLE
(For use on ceilings or light floor construction)

CARRIER ~~NATURAL-FREQUENCY~~ CONVEYORS

For more details circle NED-4773 on enclosed inquiry slip

SAME V-A RATING!

CEROC 200 SHRANK THIS TRANSFORMER

The filament transformer at the right is only ⅓ the size of its predecessor yet is rated for 10,000 hours of service at 160°C. ambient instead of 1000 hours at 85°C.

You, too, can substantially reduce the size of your transformers, chokes, relay windings, small d-c motors, etc., by specifying the use of CEROC 200 ceramic-silicone insulated magnet wire. Write for Engineering Bulletins 401B and 403C to SPRAGUE ELECTRIC CO., 183 Marshall St., North Adams, Mass.

SPRAGUE CEROC 200 MAGNET WIRE

For more details circle NED-4774 on enclosed inquiry slip

WATSON-STILLMAN

HYDRAULIC POWER TOOLS FOR INDUSTRY

HYDRAULIC JACKS

These sturdy units, with either independent or integral pumps, are useful for many jobs in construction and maintenance. Capacities from 20 to 500 tons.

WIRE ROPE SHEARS

W-S wire, cable and bar shears provide years of trouble-free general service. They are light and portable for convenient on-the-job use.

PORTABLE PIPE BENDERS

Bends standard, extra heavy and double extra heavy steel pipe from ⅜ in. to 2 in., as well as standard weight pipe up to 3 in. dia. Also solid mild steel bars up to 2 in. dia.

HAND PUMPS

Single and double plunger types, with reservoirs of different capacities for operating small hydraulic tools, jacks and other hydraulic equipment, and for general hydrostatic testing purposes.

9-M-10

Send for your copy of Bulletin A-5 . . . It's Free.

DISTRIBUTOR PRODUCTS DIVISION
WATSON-STILLMAN
ROSELLE, NEW JERSEY

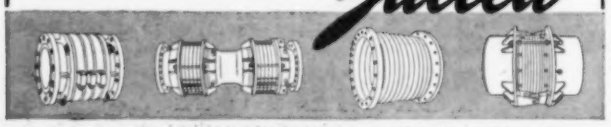
For more details circle NED-4775 on enclosed inquiry slip

Guaranteed Delivery!

As the world's largest manufacturers of expansion joints, we maintain, at all times, a complete stock of component parts for Zallea Stainless Steel Expansion Joints.

By so doing, we are in a position to fill your standard expansion joint needs promptly! (6 weeks on large orders, 4 weeks on medium orders and 2 to 3 days on emergency orders, if necessary.) Write for complete information and copies of Catalog 47 and Bulletin 351. Zallea Brothers, 818 Locust Street, Wilmington 99, Delaware.

Zallea



For more details circle NED-4776 on enclosed inquiry slip

New Processes & Materials

COTTON STRAPPING for cartons weighing up to 75 lb

Possessing high shock resistance and negligible stretch, "key-locked" nonwoven cotton strapping can be used to tie and reinforce fiberboard cartons weighing up to 75 lb. Moisture and humidity tests show that strapping holds after the carton disintegrates. A key allows it to be drawn taut and secured without denting edges of the carton. Authorized by Consolidated Classification Committee under rule 41, section 8, item 2, the cotton yarn strapping is available in unbleached white in widths of ⅜, ½ and 9/16-in. A dispenser holds one 500-yd spool. Solid colors or made-to-order imprints are available on special order. Made by **Chicago Printed String Co.,** Dept. A, 2300 Logan Blvd., Chicago 47, Ill.

For more details circle NED-4777 on enclosed inquiry slip

FOAM PLASTIC PACKAGING cushions parts to prevent damage

Packaging and shipping costs are reduced and breakage is prevented when Bakelite foamed phenolic resin is used for packing fragile or breakable products. Material is produced in large 5-ft cubes and weighs approximately one-tenth as much as shredded newspaper frequently used as packing. Foam also features flame resistance, high resilience, low density, thermal insulating properties and ease of handling. Large blocks can be cut into any desired size or shape with wood saw. Articles to be cushioned from impact or protected from each other can be pushed gently into section of foamed plastic and covered with another piece. Simple scoring of slab with fingernail permits it to be broken at scored point to obtain any size block or slab. Weight of material is ⅓-lb per cu ft. Made by **Bakelite Co.,** Dept. NE, 122 E. 42nd St., New York 17, N. Y.

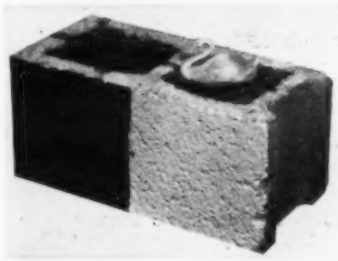
For more details circle NED-4778 on enclosed inquiry slip

PULLEY LAGGING COMPOUND provides slip-free pulley operation

Brushing or spraying pulley surfaces with Main Neoprene Pullag, a chemical rubber lagging compound, brings pulleys up to full operating efficiency for slip-free service. Pulley need not be removed from its shaft to apply compound unless sandblasting or vapor degreasing is required. Surfaces should be cleaned with Pullag solvent cleaner, coated with lagging primer then sprayed or brushed with lagging compound within half an hour. Pulley should be allowed to cure for as long as possible, although in an emergency it can be used within 24 hours. Heat curing for six hours at 150° F also allows emergency use. Formulated by **Main Products Corp.,** Room 190, 1241 Carpenter St., Philadelphia 47, Pa.

For more details circle NED-4779 on enclosed inquiry slip

MASONRY PAINT usable above or below grade



Applicable to either damp or dry surfaces, Bloc-Seal one-coat oil base masonry paint both seals and beautifies. Because of its penetrating qualities, finish will permanently cover rust stains and discolorations. It imparts smooth appearance to even rough textured surfaces and is resistant to lime, alkali, salt, mold and fungus. Paint can be applied with brush or spray and coverage is 100 to 250 sq ft per gallon, depending upon porosity and surface irregularities. Drying time is 4 to 6 hours. Colors include white, buff, stone gray, ivory, pale green, slate gray and brick red. Paint can be used on cinder block, cement block, brick, stucco, tile, asbestos siding and poured concrete forms. Made by **Surface Protection Co.,** 16807-I Euclid Ave., Cleveland 12, O.

For more details circle NED-4780 on enclosed inquiry slip

BURN TRASH and SAVE MONEY

Winnen Incinerators Pay for Themselves in Less Than a Year!

● Hundreds of users report big savings from Winnen Incinerators. In many cases these savings on trash disposal pay the entire cost *in less than six months!* Winnen Incinerators completely consume wet or dry refuse of all types at the rate of 400 lbs. per hour, and without disagreeable odors. *New* electric-gas, pressurized burners eliminate practically all smoke. Quick and easy to load and fire. Operates unattended with complete safety. Available in natural, manufactured or bottled gas, and oil-fired models.

FREE LITERATURE . . . completely describes all the money-saving and sanitary advantages of Winnen Commercial Incinerators. Write today!

WINNEN INCINERATOR COMPANY
932-A BROADWAY BEDFORD, OHIO

For more details circle NED-4781 on enclosed inquiry slip

Melting Capacity 30,000 pounds per hour

AJAX INDUCTION FURNACES

In Operation at the Waterbury, Conn. plant of the Scovill Manufacturing Company

As a part of the most modern and completely integrated brass cold rolling operation in the world, Scovill Manufacturing Company of Waterbury, Connecticut, has in operation three 1000 kW. Ajax-Scomet electric induction melting furnaces with a production of 10,000 pounds each per hour. These furnaces, the largest in the brass industry, are equipped with the most precise control of melting temperatures by means of a permanently inserted thermocouple and have thereby considerably reduced melting losses.

Every half hour each of these furnaces in turn discharges its 5,000-pound charge into a ladle which is transferred by crane to a holding furnace (shown at right) of 9,000 pounds' capacity. This furnace is mounted over the continuous casting machine located on the floors below, and thus is able to provide a permanent flow of molten brass to the mold. The intermixing of the charges from the three furnaces gives additional uniformity of composition.

WRITE FOR FURTHER DETAILS ABOUT AJAX FURNACES

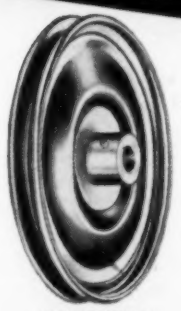
AJAX ENGINEERING CORP., TRENTON 7, N. J.

AJAX TAMA-WYATT INDUCTION MELTING FURNACE

AJAX ELECTRO METALLURGICAL CORP., and Associated Companies
AJAX ELECTROTHERMIC CORP., Ajax Northrup High Frequency Induction Furnaces
AJAX ELECTRIC CO., INC., The Ajax Hultgren Electric Salt Bath Furnace
AJAX ELECTRIC FURNACE CORP., Ajax Wyatt Induction Furnaces for Melting

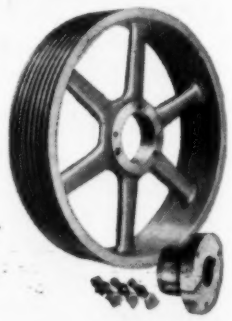
For more details circle NED-4782 on enclosed inquiry slip

A COMPLETE LINE OF V-BELT SHEAVES



FHP SHEAVES

Pressed Steel and Cast Iron, available in a complete range of sizes for 3L, 4L and 5L V-Belts. Also Variable Pitch—single and two groove. . .Bored to size or bushed. Write for Bulletin 294.



"SURE-GRIP" MULTIPLE GROOVE SHEAVES

Wood's "Sure-Grip" Sheaves—with one-piece, flanged hubs split from end-to-end for maximum grip on the shaft—are easy to mount, quick to remove and interchangeable. More sheaves used with this hub construction than any other type. . .available in A, B, C, D and E groove sections. Send for Catalog 192.

WOOD'S PRODUCTS
SHEAVES • FLAT BELT PULLEYS • HANGERS • PILLOW BLOCKS • COUPLINGS • BEARINGS • COLLARS • "SURE-GRIP" SHEAVES AND PULLEYS • "SURE-GRIP" STANDARD, SUPER AND STEEL CABLE V-BELTS • COMPLETE DRIVES.

T. B. Wood's SONS CO.
CHAMBERSBURG, PA.

Mechanical Power Transmission Manufacturers—Since 1857.

BOSTON, MASS. • NEWARK, N. J. • DALLAS, TEXAS • CLEVELAND, O.

For more details circle NED-4783 on enclosed inquiry slip

COMPRESSION & FLEXURE TEST UNIT handles wide range of materials

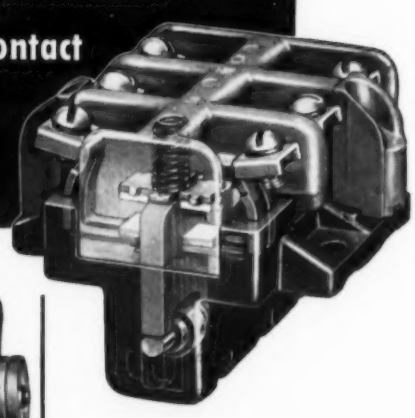
"Flat crush" and "column compression" tests of paper and corrugated board can be quickly handled by a new instrument offered by Fisher Scientific Company. The unit also handles compression tests of cases, drums, cartons and containers in conformance with standards of the Technical Association of the Pulp and Paper Industry. It can be used in general compression testing of springs; and makes flexure tests of plastics, glass, ceramics, insulation board, plywood, asbestos-cement shingles, and carbon-brush materials. Tests are made by placing material between two platens, manipulating two simple controls, and reading a large linear load scale. The upper platen supplies the compression force. It rides four rigid upright posts; is driven downward by motor-powered screws; can be set to travel at any desired speed up to 2½ inches a minute. The lower platen activates the weighing mechanism. Small and compact (24" x 20" x 30" high), the unit handles specimens up to 12" x 12" x 16" high through a range of 0 to 1,000 pounds.

For further information on the new Multi-Purpose Compression Tester, write **Fisher Scientific Co.**, 755 Forbes St., Pittsburgh 19, Pa. *Advt.*

▲ For more details circle **NED-4784** on enclosed inquiry slip ▲

A new line of CUTLER-HAMMER SWITCHES

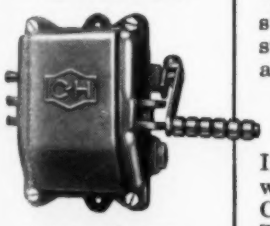
utilizing an identical common contact structure



ROLLER LEVER SPRING RETURN TRACK TYPE SWITCH

FORK LEVER TWO POSITION TRACK TYPE SWITCH

Track type switches have clamp-on operating lever to mount at any angle on shaft . . . also on opposite end of shaft for opposite side track installation. Overtravel in both directions. Cast iron NEMA 1 Standard, NEMA 4 Watertight or NEMA 5 Dusttight enclosure. Tapped for conduits. Two pole or three pole with contacts normally open and/or normally closed, with or without overlap. 1.25 amps at 250 volts d.c.



FOOT OPERATED MASTER SWITCH

Double pole, two wire remote control, hold down type. Double break contacts, normally open, convertible to normally closed or normally open and normally closed. Cast iron, split type, NEMA 1 Standard, NEMA 4 (Dusttight) or NEMA 7 (Class I, Group D).

CUTLER-HAMMER announces a new line of multi-purpose switches utilizing an all-new simplified identical contact structure. These switches are for use in the control circuits of automatic starters on a wide variety of machines such as woodworking, tire making, machine tools, steel mill equipment, hoists, conveyors, crane bridges, etc.

Features of the new contact structure include:

Standardized and interchangeable. This structure is identical with that used in other Cutler-Hammer limit switches, mill accessory switches, etc. It is completely interchangeable through the line and simplifies problems of spare parts and replacement.

Simplified. The contact structure is reduced to very simple elements. Easy to understand. Easily accessible. Easy to renew parts.

Sturdy construction. Cam and roller operated. Twin break contacts of "fine" silver, arc-resistant molded supports, etc. make this contact structure long lived and dependable. Small and compact.

Write for descriptive sheets on any of these switches. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto, Ontario.

CUTLER-HAMMER MOTOR CONTROL C-H

▲ For more details circle **NED-4785** on enclosed inquiry slip ▲

New Processes & Materials

METAL DROSS RECLAIMER tones high lead content metals

An effective means for treating slag, removing impurities and converting back to metal the dross of tin, lead, cadmium, zinc and antimony is provided by Slago dross reclaimer. Product also contains revitalizing agent which tones the metal and gives a clean spider web appearance. It has strong reducing action on several nonferrous metals, will retain tin in alloys of higher melting point and will prevent excess loss of tin, lead, cadmium, zinc or antimony by oxidation because dross is reduced to metal at lower temperatures. Formulated by **Farrelloy Co.**, 1246 N. 26th St., Philadelphia 21, Pa.

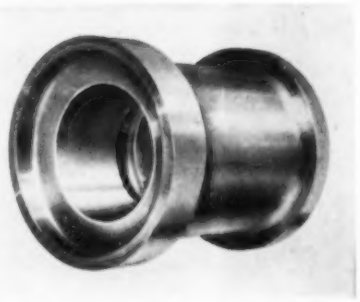
▲ For more details circle **NED-4786** on enclosed inquiry slip ▲

RUBBER-PHENOLIC VARNISH for highly flexible plastics

Manufacture of laminated plastics having extremely high flexibility and impact strength is now feasible with development of rubber-phenolic varnish 12359 formulated to tackle mechanical applications where toughness is required. Gears, shuttles, tubing and caster wheels are representative of applications where rubber-phenolic laminates can be used. In paper coating tests, varnish applied to packaging papers increased their strength and improved their resistance to moisture. Phenolics tested heretofore have been too brittle for this application. Varnish formulated by **General Electric Co.**, Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

▲ For more details circle **NED-4787** on enclosed inquiry slip ▲

TURBINE SHAFT BUSHING bronze unit is babbitt lined



This high speed turbine shaft bushing of serviceable bronze alloy has overall dimensions of 5 5/16 x 4 5/8 in. and 1/16-in. lining of babbitt antifriction alloy. Unit is centrifugally cast at bonding temperature to assure absence of porosity and bonding of babbitt to bronze. It is finished to close tolerances and is double flanged with center oil groove as shown. Bushing meets specifications of Army, Navy, Ordnance, Engineers and Air Corps. Unit illustrates type of special formula bearings or bushings available with plain, babbittt or graphite linings and machined to precise tolerances. Made by **Bronze Bearings Inc.**, 586 North Ave. E., Cranford, N. J.

▲ For more details circle **NED-4788** on enclosed inquiry slip ▲

INDUSTRIAL LUBRICANT resists temperature extremes

High performance qualities in extremes of heat and cold plus high resistance to water and corrosion are advantages of Sotol multipurpose industrial lubricant. Product retains its lubricity and will not melt at 1000° F or more and remains effective even down to 0° F. It has clean, transparent amber color and consists of synthetic base combined with high quality oil and other organic compounds. Product is practical for lubricating parts frequently submerged in water, exposed to rainfall or subjected to moisture condensation. It has been tested successfully in heavy duty excavating, transportation, logging, mining and oil drilling equipment. Lubricant is packed in 40, 110, 235 and 435-lb units. Made by **Southwestern Petroleum Co.**, Dept. NED, 917 N. Main St., Ft. Worth 1, Tex.

▲ For more details circle **NED-4789** on enclosed inquiry slip ▲

Aeroquip

YOUR BEST BUY IN FLEXIBLE HOSE LINES

FITTINGS are detachable and reusable. For on-the-spot hose line replacements cut bulk hose to required length and attach fittings. It saves time and money, and reduces inventory.

HOSE is tough, durable and fire resistant. Ideal for use with hydraulic fluids, lubricants, water, gasoline, Diesel fuel, air and many other fluids.

AEROQUIP CORPORATION
JACKSON, MICHIGAN

FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE

Aeroquip Products are fully protected by Patents in U.S.A. and Abroad

▲ For more details circle **NED-4790** on enclosed inquiry slip ▲

The New CLEARVIEW

NAMEPLATE PRESS

EASY TO OPERATE • COMPACT • DURABLE

Here at last is a new low-priced Nameplate Press that will pay for itself quickly and many times over. Now you can stamp neat, perfectly aligned letters and figures on all types of identification plates with this new, easy-to-operate Nameplate Press:

MACHINERY DETAIL PLATES
KEYS — TAGS — CHECKS
DIRECTORY PANELS
and scores of other identification purposes.

PREVENTS IRREGULAR ALIGNMENT, SPACING, DEPTH

- Stamps Neat Uniform Characters
- Fully Automatic Letter Spacing
- High Quality Hardened Steel Dial
- Adjustable Depth Control
- Accommodates Plates up to 4" x 8"
- Nickel Plated Throughout
- Uses No Electricity

FULLY GUARANTEED

Write, call or wire today for complete information and price.

The CLEARVIEW Company

177 Stanton St., New York 2, N. Y. GR. 3-3830

▲ For more details circle **NED-4791** on enclosed inquiry slip ▲

For Brazing at 2050°F.

Woven Wire Belts built by ASHWORTH are breaking records . . .

On three different installations
National Stamping Company, Detroit
Contract Specialties Corporation, Detroit
Salkover Metal Processing of Illinois, Chicago

Ashworth built Wire Belts have broken all previous records for this type of service, running up *to 7,000 and 8,000 hours at 2050°F.*

WHAT IS YOUR HANDLING or PROCESSING PROBLEM?

WRITE FOR ILLUSTRATED CATALOG 47D

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

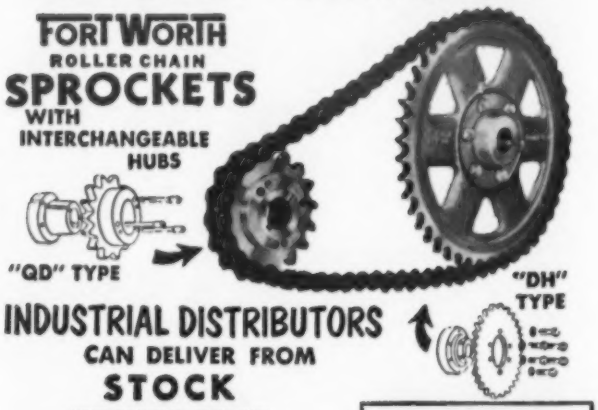
Sales Engineers located in Buffalo • Chattanooga • Chicago • Cleveland • Detroit • Los Angeles • New York • Philadelphia • Pittsburgh • Seattle

Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal -

▲ For more details circle **NED-4792** on enclosed inquiry slip ▲

IMMEDIATE DELIVERY
WITHOUT REBORING!

FORT WORTH ROLLER CHAIN SPROCKETS WITH INTERCHANGEABLE HUBS



INDUSTRIAL DISTRIBUTORS CAN DELIVER FROM STOCK WITHOUT DELAY FOR REBORING

FORT WORTH Sprockets Offer Many Advantages
- Actually Fits Shaft Better
- Reduces Cost of Spares
- Simplifies Changes
- Cuts Replacement Costs

HUBS ALSO FIT FORT WORTH TRANSCO V-BELT SHEAVES

CATALOG 300-C
Shows list prices and dimensions of stock QD & DH sprockets. Chain dimensions and drive recommendations are in easy-to-use form.

FORT WORTH STEEL AND MACHINERY CO
Dept. 225, 3600 McCart St. Fort Worth, Texas

For more details circle NED-4793 on enclosed inquiry slip

New! Farquhar SUPER-ACE CONVEYOR

slashes coal handling costs!

Here's a brand *new* Farquhar Portable Conveyor with *exclusive* features *especially designed to save you time and money* in your coal handling operation. Heavy plate construction, channel iron wheel truck, closer tolerances—all give you greater strength with less weight! Bolted construction makes for easy repairs! Top-quality belting, improved pulley construction, deeper, wider return dust pan assures longer belt life! Moving parts feature ball bearings! Either chain and sprocket or V-belt drive!

Farquhar CONVEYORS SAVE YOU MONEY

WRITE NOW for complete information on this new time and money-saving Farquhar Super Ace Portable Coal Conveyor!

A. B. FARQUHAR CO., Conveyor Dept. Y-04,
142 N. Duke St., York, Pa., or 618 W. Elm St., Chicago 10, Ill.

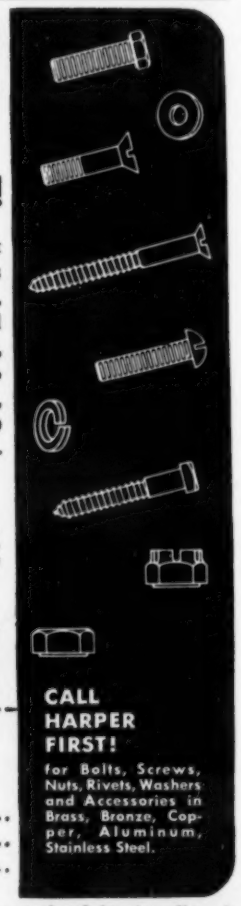
A. B. FARQUHAR COMPANY Division of THE OLIVER CORPORATION

For more details circle NED-4794 on enclosed inquiry slip

HARPER

Specialist in *all* Non-Corrosive Fastenings!

Call Harper *first!* America's largest producer of non-ferrous and stainless steel fastenings—specializing in bolts, screws, nuts, rivets, washers and accessories in brass, bronze, copper, aluminum, Monel, stainless steel—to solve your problems in corrosion, heat, abrasion and stress. Over 7,000 items stocked by warehouses and distributors from coast to coast.



FREE—*this 56-page Harper Price List and Stock Book.*

HARPER EVERLASTING FASTENINGS

CALL HARPER FIRST!
for Bolts, Screws, Nuts, Rivets, Washers and Accessories in Brass, Bronze, Copper, Aluminum, Stainless Steel.

The H. M. Harper Company
8212 Lehigh Ave.,
Morton Grove, Ill.
Rush Harper Price List and Stock Book.
Name.....
Address.....
City.....State.....

For more details circle NED-4795 on enclosed inquiry slip

New Processes & Materials

TRANSPARENT PLASTIC FILM
vinyl product is strong, durable

Transparent vinyl plastic film produced in thicknesses of 0.001-in. or less by "blow extrusion" process is extremely strong and durable and has good clarity and insulating properties. The film, based on Marvinol VR-10 resin, is extruded through a circular die at temperatures between 375 and 425° F. It can be produced in widths exceeding 100 in. and in thicknesses down to 0.0003-in. Material, which can be made soft and flexible or stiff and paper-like, is produced in wide range of bright colors. It is water, dust and greaseproof. Made in a tubular shape, application can be for containers for various uses. Price is competitive with other plastic film materials. Made by **United States Rubber Co.**, Naugatuck Chemical Div., Naugatuck, Conn.

For more details circle NED-4833 on enclosed inquiry slip

NEOPRENE-JACKETED CORD
identification brand shows length

Full identifying data is branded at precise two-foot intervals on this Neoprene-jacketed cord and cable to provide simple means of measuring and cutting to exact lengths. Legend impressed into jacket of cable illustrated includes the name "Bronco 60 Neoprene Certified" plus type, number of conductors, size, rated voltage and "P116BM," the flameproof registration number of the U.S. and Pennsylvania Bureaus of Mines. Word Bronco appears every 2 ft, exactly. Branded label eliminates guesswork as to size and capacity when taking cable from one job to another. Cords and cables are extremely flexible and are packaged in corrugated cartons for convenient handling and storage. Made by **Western Insulated Wire Co.**, 2421 E. 30th St., Los Angeles 58, Calif.

For more details circle NED-4796 on enclosed inquiry slip

BEARING BALLS
have closely matched tolerances

Because they are made to closely matched tolerances within established commercial and precision limits, Se-Jector gaged bearing balls equalize load distribution to improve bearing performance and increase bearing life. Each individual ball is subjected to a sequence of multiple gaging which not only selects balls in closely matched tolerances, but rejects any ball lacking the required sphericity or having flats. Ball accuracy also reduces cost and speeds up assembly. Illustration shows gaging machine. Made by **Pioneer Steel Ball Inc.**, 37 Mill St., Unionville, Conn.

For more details circle NED-4797 on enclosed inquiry slip

LAYOUT INK
is sprayed from aerosol container

Machinists, tool and die makers, production layout men and inspectors can save time by using instant drying layout ink which is packed and pressure sealed in aerosol type container. Ink is released in fine spray by depressing button on top of container and dries within sixty seconds to smooth, hard, nonglare film that will not streak or flake and is resistant to cutting oils and heat. It readily adheres to metal, glass or wood, but is easily removed with lacquer solvent, toluol or xyol. Losses from evaporation, hardening, spilling or broken containers are minimized. Standard color is dark blue unless otherwise requested. Made by **Crown Industrial Products Co.**, 1032 Borden Ave., Sycamore, Ill.

For more details circle NED-4798 on enclosed inquiry slip

IMMEDIATE DELIVERY!

40 Stock Sizes.
Tuck end tough kraft.
Stocked for immediate shipments.
Sizes range from 1/2 x 1-7/16 inches square to 2 x 7-1/4 inches.
Special cartons, plain or printed, made to your specifications.

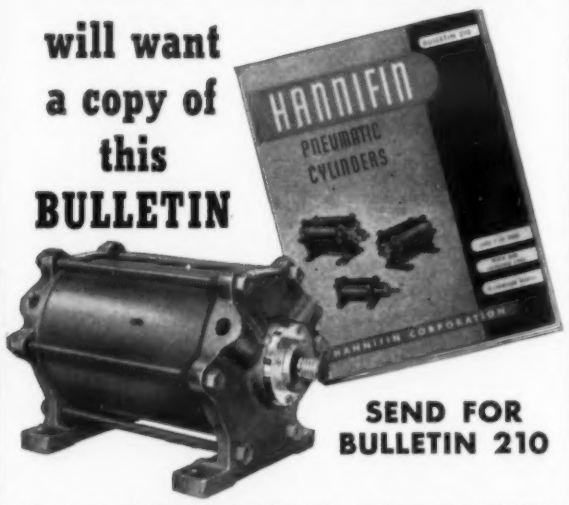
•

Tags in all grades and colors to your order, printed, numbered, or plain.

Campbell BOX AND TAG CO.
Main & Equipment St.
South Bend 23, Indiana

For more details circle NED-4799 on enclosed inquiry slip

EVERY ENGINEER will want a copy of this BULLETIN



SEND FOR BULLETIN 210

It's easy to get the right cylinder for even the most special jobs when you use Hannifin's big handbook on PNEUMATIC CYLINDERS. 49 pages of helpful specification and engineering data, complete with diagrams and dimensions. The Hannifin line is complete! 6 standard mountings . . . many combination mountings . . . adjustable cushions at either or both ends . . . 2 types of pistons . . . bores to 16". Exclusive construction features assure trouble-free, efficient operation. Send for Bulletin 210. Hannifin also builds custom cylinders in quantity to special design. *Bring us your cylinder problems.*

HANNIFIN
1127 S. Kilbourn Ave., Chicago 24, Ill.

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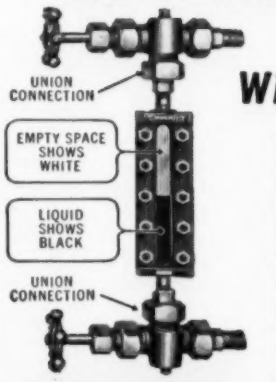
PENBERTHY LIQUID LEVEL GAGES

Can be Removed and Replaced Without Shutdown



PENBERTHY REFLEX GAGE

Union connections between the gage and the valves permit removal of gage for repairs without shutting down the equipment. Just close the valves, uncouple the unions and remove the gage. The convenience of this is obvious. When glasses have to be replaced or repairs made, it is not necessary to work in an awkward position or to shut down. Another advantage: a gage needing repairs can be replaced immediately by a spare and the repairs made at leisure. There are many other reasons for the superiority of Penberthy Liquid Level Gages; ask for Catalog 35.

PENBERTHY PRODUCTS

PENBERTHY INJECTOR COMPANY
DIVISION OF THE BUFFALO-ECLIPSE CORPORATION
Established 1886 DETROIT 2, MICHIGAN Canadian Plant, Windsor, Ont.

For more details circle NED-4801 on enclosed inquiry slip

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Have You Filled In Your Name and Address?

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To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

4000	4050	4100	4150	4200	4250	4300	4350	4400	4450	4500	4550	4600	4650	4700	4750	4800	4850	4900	4950	5000
4001	4051	4101	4151	4201	4251	4301	4351	4401	4451	4501	4551	4601	4651	4701	4751	4801	4851	4901	4951	5001
4002	4052	4102	4152	4202	4252	4302	4352	4402	4452	4502	4552	4602	4652	4702	4752	4802	4852	4902	4952	5002
4003	4053	4103	4153	4203	4253	4303	4353	4403	4453	4503	4553	4603	4653	4703	4753	4803	4853	4903	4953	5003
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4020	4070	4120	4170	4220	4270	4320	4370	4420	4470	4520	4570	4620	4670	4720	4770	4820	4870	4920	4970	5020
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FOLD ON THIS LINE

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4049	4099	4149	4199	4249	4299	4349	4399	4449	4499	4549	4599	4649	4699	4749	4799	4849	4899	4949	4999	5049

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52

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
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There is a Rotary Pump that will fit your job. The following features of—

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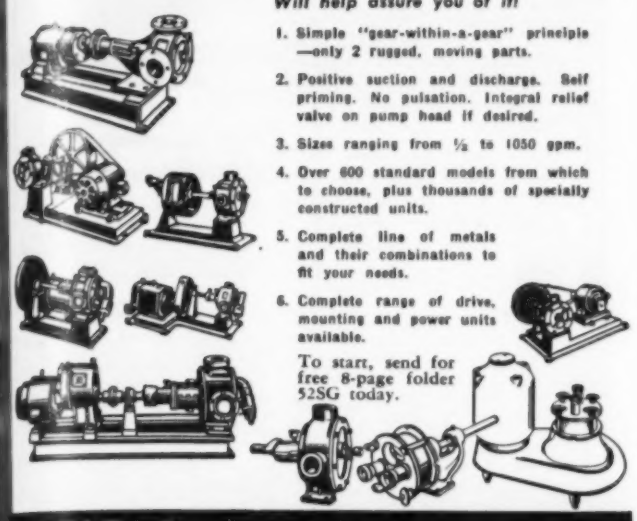

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1. Simple "gear-within-a-gear" principle—only 2 rugged, moving parts.
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3. Sizes ranging from ½ to 1050 gpm.
4. Over 600 standard models from which to choose, plus thousands of specially constructed units.
5. Complete line of metals and their combinations to fit your needs.
6. Complete range of drive, mounting and power units available.

To start, send for free 8-page folder 52SG today.

Viking PUMP COMPANY Cedar Falls, Iowa — See Our Catalog in SWEETS

For more details circle **NED-4802** on enclosed inquiry slip

HALLOWELL

"740" STEEL CART

has LOOKS for store and office
STAMINA for shop and factory

The "740" carries everything from stationery and supplies to tools and dies. Its *large capacity* saves countless steps and time. Its *compact design* is made for narrow aisles and limited space.

THE "740" FEATURES

- detachable handle—use it either end
- two trays with deep sides for safe handling—16" x 30" or 24" x 36"
- legs with unique double-angle construction—for extra strength without extra weight
- ball bearing caster races—make steering easy
- sturdy, free-rolling casters—make pushing easy

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Jenkintown 24, Pa.

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HALLOWELL MATERIALS HANDLING DIVISION
JENKINTOWN, PENNSYLVANIA **sps**

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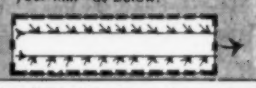
Murray

Comfortable workers are more efficient. Removal of heat, dust, fumes and impurities are a "must" in up-to-date factories & plants. Ventilation alone, spot cooling, or a combination of both can solve your particular comfort problem.

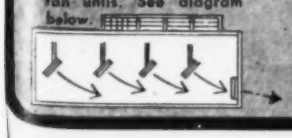
EVACUATION VENTILATING

Adequate exhaust at high wall levels or via roof evacuate the hot trapped air in your mill—as below.



SPOT MAN-COOLING

Particular work areas may require spot cooling via direct or portable ventilating fan units. See diagram below.



Write to below address for complete information and literature and prices—along with name of your nearest distributor—or arrangement for direct purchase.

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EXCLUSIVE SALES AGENTS

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INDUSTRIAL VENTILATING FANS

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New Processes & Materials

BARREL BURNISHING POWDER for copper, brass, bronze & alloys

Excellent color and fine finish is imparted to copper, brass, bronze and copper alloy stampings, castings and other parts that can be tumbled with Blue Magic burnishing compound No. 11. It will also work well with certain die casting materials including slush metals, and also is a cleaner, degreaser and rust remover. This free-flowing powder is light in color and can be used with any coated abrasives, quarried stones or other abrasives as well as with steel balls, shapes and other burnishing media. Because of detergency and rinsibility, parts leave barrel free from chips, abrasives, sludge, oil traces or other foreign matter that might impair subsequent plating or other operations. Made by **Blue Magic Chemical Specialties Co.,** 2137 Margaret St., Philadelphia 24, Pa.

For more details circle **NED-4805** on enclosed inquiry slip

HEAVY DUTY LUBRICANT has metallic lead content

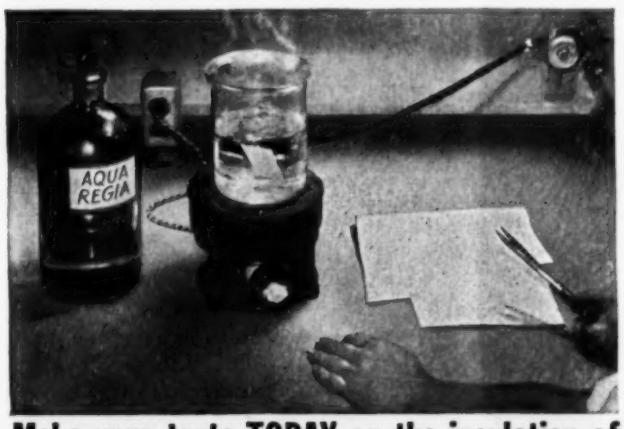
Function of the high pulverized lead dust content in Lead-Lube heavy duty grease lubricant is to form self-lubricating surfaces over all wearing parts of gears and bearings so that the surfaces are protected from wear. Homogenization prevents the lead from settling out of suspension. In older equipment, the metallic lead resurfaces pits and scores and thus restores a degree of efficiency comparable to that which existed before wear. Lack of susceptibility to rust and many forms of chemical attack also enhances its value as a lubricant in many applications. Made by **Knapp Mills, Inc.,** 23-00 Borden Ave., Long Island City 1, N. Y.

For more details circle **NED-4806** on enclosed inquiry slip

PIPE PROTECTING TAPE protects against acids, water, oil

Possessing insulation resistance of 100,000 megohms and dielectric strength of 10,000 v, 10-mil Dressertape polyvinyl chloride pipe tape has high adhesive firmness, and good strength, sunlight resistance and aging qualities. Tape offers protection against water, salt water, acids, alkalies, oil and soil chemicals. It conforms to irregular surfaces and is applied cold. Backfilling can be done immediately after tape is applied. Although only 2-in. width is available, other sizes will be offered. Made by **Dresser Industries, Inc.,** Dresser Mfg. Div., 52 Fisher Ave., Bradford, Pa.

For more details circle **NED-4807** on enclosed inquiry slip



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Irvington Teflon-Coated Fiberglas is a Class "H" insulation that is *completely* inert to just about every chemical and solvent. It has excellent electrical properties—does not deteriorate—retains its toughness over a wide temperature range—is not affected by outdoor weathering. In addition to electrical insulation, it is used for gaskets in the chemical industry, heat-sealing machinery and conveyors for sticky materials.

See for yourself what this amazing new material can do—so that you will be ready to include it in your plans for the future!

*TM Reg. U. S. Pat. Off. by E. I. du Pont de Nemours & Co. (Inc.)
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LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON
VARNISH & INSULATOR COMPANY
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Plants: Irvington, New Jersey; El Monte, California; Hamilton, Ont., Canada

For more details circle **NED-4808** on enclosed inquiry slip

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• Here is America's Number One copying machine . . . recommended for all large-scale requirements. The Printmaster gives you low-cost, high-quality copies of your translucent originals in seconds—ready for instant use. Copies up to 42" wide (or 54", with the largest machine). Gives you a positive from a positive—and there are no messy water baths, no potash baths, no driers.

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"From Research to Reality."
Ozalid in Canada—Hughes Owens Co., Ltd., Montreal

For more details circle **NED-4809** on enclosed inquiry slip

DoALL *Certified* SAW BANDS SET to Cut Faster and Longer

Checking accuracy of DoALL Saw Set with an optical comparator.

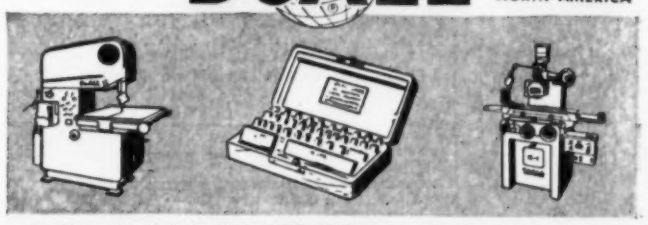
The SET of DoALL saw band teeth is Certified uniform to a tolerance of plus or minus .0015", with symmetry of set held within .0005".

THE set of DoALL saw band teeth must be held within extremely close tolerances to give maximum cutting speed and saw band life. Among the 83 separate quality control inspections given DoALL Saw Bands, several are devoted exclusively to checking the accuracy of saw set. Failure to meet tolerances means the band is rejected. Every DoALL Saw Band is sold under a *guarantee* of perfect quality or replacement at no cost. For best performance from any make of vertical or horizontal band saw, CALL DoALL for saw bands. Literature free on request.

THE DoALL COMPANY • 254 N. Laurel Ave., Des Plaines, Ill.

DoALL Saw Band Manual—160 pages of information on selection and use of saw bands and other band tools for sawing, slicing, grinding, filing and polishing all materials. An essential guide for any plant doing band machining. Price $2.00. Call your local DoALL Sales-Service Store or write to DoALL.

SB-11 **DoALL** 35 SALES-SERVICE STORES IN NORTH AMERICA



For more details circle **NED-4810** on enclosed inquiry slip

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FOR DESIGNERS and FABRICATORS of HEAT TRANSFER EQUIPMENT

Handy condensed technical data on tubing properties, applications, and fabrication to help you meet today's production challenges.

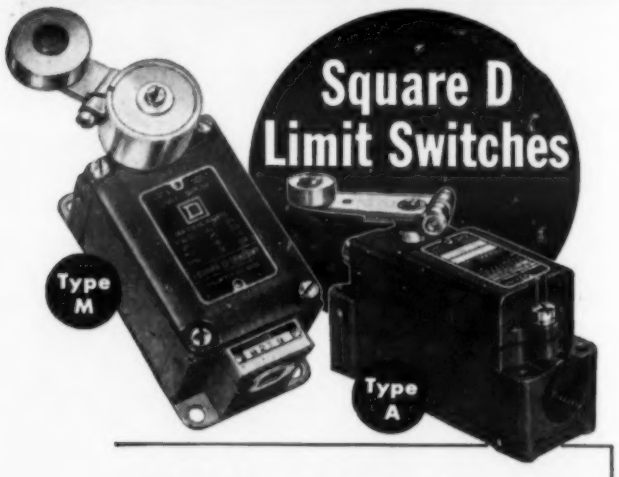
write for...

• Write for TECHNICAL BULLETIN TB-142.

TA-1672G

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
General Offices: Beaver Falls, Penna.
Plants: Beaver Falls, Penna. and Alliance, Ohio

▲ For more details circle NED-4811 on enclosed inquiry slip ▲



for Machine Tool Service

Class 9007 Type A—small precision switches with variety of roller arm or push rod operating mechanisms—flush or surface mounting. Accurate snap switch action.

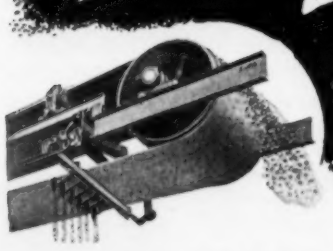
Class 9007 Type M—heavy duty switches with accurate, quick-acting latch mechanism. Variety of operating arms—double break silver contacts—accessible terminals—long life. *Write for Bulletins 9007A and M. Square D Company, 4041 N. Richards St., Milwaukee 12, Wisconsin.*

Ask Your Electrical Wholesaler for Square D Products

SQUARE D COMPANY
DETROIT • MILWAUKEE • LOS ANGELES

▲ For more details circle NED-4812 on enclosed inquiry slip ▲

Clean CONVEYOR BELTS Last far Longer!



INSTALL S-A

Multiple Blades Keep Belt Clean and Dry

SPRING-TYPE
CONVEYOR BELT CLEANER

• Removes wet or dry material from belts before they can be ground into belt by return pulleys and idlers. Adjustable to fit any conveyor. No moving parts, no power required. Easily installed by your own plant personnel. *Cost little, saves a lot!*

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Standard Products Division
12 Ridgeway Ave., Aurora, Ill.
Please send me Bulletin 651 on Conveyor Belt Cleaners.
Name
Company
Address
City Zone State

▲ For more details circle NED-4813 on enclosed inquiry slip ▲

New Processes & Materials

ROOF REPAIRING MATERIAL reinforcing fabric is of Fiberglas

Used with roof coating, No-Rot reinforcing fabric stops leaks and waterproofs areas around flashings, firewalls, chimneys and skylights. Material is composed entirely of fireproof Fiberglas threads. Sieve-like mesh enables roof coating to bind firmly to surface below as well as to membrane. Fabric is impervious to rot and decay, is lightweight and has high tensile strength. Being flexible, it can be fitted snugly around corrugated surfaces, pipes and into sharp corners to form a tight, waterproof seal. Made by **Monroe Co.**, Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

▲ For more details circle NED-4814 on enclosed inquiry slip ▲

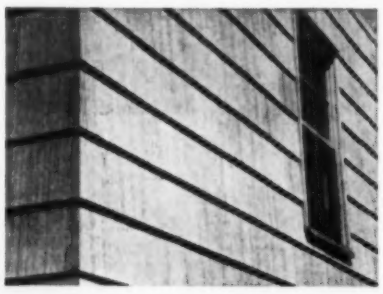
MACHINERY MAINTENANCE STEEL offered annealed or treated to test

Available from warehouse stock, No. 5-876 steel for machinery maintenance parts is offered annealed or treated to test. It meets three different service requirements. Hard tempered parts requiring high surface hardness and wear resistance with good strength and toughness will withstand heavy loads and shocks. When drawn between 400 to 550° F, it has Rockwell C hardness of 50-56, suitable for gears, racks, clutch pins, locking pins and other machine parts.

For tough-tempered parts, which do not require high surface hardness, it has greatest possible strength and toughness. As drawn between 700 and 1200° F, it has tensile strength of 115,000 to 235,000 psi, Rockwell C hardness of 31-49 and Brinell hardness of 286-477 for such parts as shafts, axles, bolts, studs, etc. It can be used as a mild tempered alloy steel that can be readily machined in treated condition as received. Average properties are: tensile strength, 135,000 psi; Brinell hardness, 275. Made by **Carpenter Steel Co.**, 318 W. Bern St., Reading, Pa.

▲ For more details circle NED-4815 on enclosed inquiry slip ▲

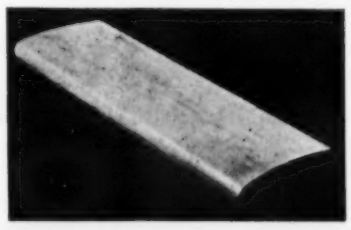
ASPHALT WEATHER STRIP creates shadow-butt effect on siding



Essentially an asphalt weather strip that provides added insulation and weather protection, Shadowedge double coursing strip also enhances appearance of asbestos-cement wall siding. Strip measures 12 x 36 in. and tapers from 1/16-in. thick head to 5/16-in. thick butt. This taper thrusts lower edge of shingle forward creating deep-shadow thick-butt appearance. Product can be applied over any type board lumber, plywood, gypsum, fiber board or other sheathing material. While designed primarily for use with asbestos-cement siding, it can be used with any other type of shingle or lapped siding. Made by **Ruberoid Co.**, 502 Fifth Ave., New York 18, N. Y.

▲ For more details circle NED-4816 on enclosed inquiry slip ▲

POROUS STAINLESS SHEET for chemical filtering applications



Having wide application possibilities as a filtering medium in the chemical industries where ready release of collected solids is required, porous stainless sheets have shear strengths in range of 60,000 psi and smoothness comparable to commercial rolled stainless sheet finishes. Specific applications would include use on rotary vacuum filters cleaned by blowback, on vacuum plate filters, fluid catalyst filters where cake is not readily discharged by blowback and similar solids collection service. Flow capacities range downward from 200 cfm of air per square foot of filter surface at 10 psi differential pressure, or from 20 gpm per sq ft of water at 10 psi differential. Pore diameters from 20 microns down to zero can be supplied. Material is stocked in type 304 stainless, but is also available in types 309, 316, 347, Monel and cobalt-base Stellite L-605. Made by **Micro Metallic Corp.**, 46 Sea Cliff Ave., Glen Cove, N. Y.

▲ For more details circle NED-4817 on enclosed inquiry slip ▲

SAVE UP TO 85% ON TOOLS—MACHINERY AND PARTS!!

Our latest & biggest CATALOG of NEW and SURPLUS BARGAINS. Thousands of items at UNHEARD OF LOW PRICES! SAVINGS UP TO 85% in Hand & Power Tools, Electrical Supplies, Industrial Machinery, Gas & Electric Motors, Winches, Hoists, Machine Tools, Gauges, Welding Equipment, Pneumatic & Air Tools, Raw Stocks, Aluminum, Brass, Copper & Steel in Sheets, Bars, Rods, Tube & Extrusions, Nuts, Bolts, Rivets, Screws, Wire, Cable & a Huge Stock of HYDRAULIC SUPPLIES including Cylinders, Valves, Pumps, Motors, Fittings, Tubing, etc. While these items last we will continue to sell them at typical low Palley Prices. WRITE TODAY FOR YOUR COPY!

1952-230 PG. CATALOG

WAR SURPLUS SAVINGS

Stationary or Portable ARC WELDER — 97.50
Delivers 300 Amps., continuous—or 350 to 400 Amps., intermittent: Designed to weld continuously for hours . . . This unit is built around a rugged, heavy duty, aircraft type generator and comes complete with pulley reactor, output controls, switches and & rheostat mounted on sturdy steel frame. Operates on 15 H.P. for maximum output. Gas or electric motor. For light or heavy industrial work.

HYDRAULIC PUMP & CYLINDER SPECIALS

Hyd. Variable Displacement PUMP — 32.50
Will deliver maximum volume at any pressure setting between 600 and 900 P.S.I. Pump housing serves as reservoir for system. Has built-in compressed air super-charger which makes system independent of outside atmospheric pressure. Rotation is left hand only. Maximum speed for continuous duty is 3750 R.P.M. Displacement is .484 cu. in. per revolution. or approximately 4 G.P.M. at 1750 R.P.M. . . . . .

Special! HYDRAULIC CYLINDER — 29.95
Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30½" length. Ideal for roll-form—shop machinery-etc.

P-3 STRATO POWER PUMP — 19.50
With built-in variable flow control valve in head. Positive displacement piston type. Displacement capacity: 2 gal. per min. at 1500 RPM at 1250 PSI. Pressure limit 1250 PSI continuous. 1400 PSI for 15 sec. Operates at 3750 RPM, intermittent max. 4500 RPM. Rotates either direction without adjustment . .

No. 1 HYDRAULIC CYLINDER — 5.75
Double action. Bore is 1" — Shaft ½". Has stroke of 2½" to 4". Stroke can be adjusted with internal sleeve stops. Overall length is 8½". Will take 1500 lbs. continuous duty. 3000 lbs. intermittent. Will lift or push up to 1100 lbs.

P-4 VICKERS ANGLE PUMP — 19.49
Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI., continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum, 4500 RPM. Rotates to the right only

FOUR WAY VALVE — 9.75
Poppet type. Pressure balanced OH at neutral position. Piston type with built-in relief valves for limit of cylinder strokes. 5/8" AN tube size (7/8"-14 thread) inlet & outlet. Parts to cylinder are 1/2" AN tube size 3/4"-16 thread).

PALLEY SUPPLY CO. DEPT. NED-5 2263 E. Vernon Ave., Los Angeles 58, Calif.

Order from this ad. All sales final. All prices F.O.B., Glendale. Pay by M.O. or check. P.O.'s accepted from D.&B. firms. ½ deposit with C.O.D.'s.

▲ For more details circle NED-4818 on enclosed inquiry slip ▲

For Pressures to 5000 psi.
Their faster action gives closer control of pressures

In Denison Pressure-Control Valves, *lower differential between opening and closing pressures* brings faster action . . . closer control of system pressures . . . a reduction in over-pressure and pressure-drop conditions.

Extremely close fit of all inner sealing surfaces also boosts efficiency by reducing leakage to near-zero.

The rugged, compact construction of Denison HydrOILic Valves saves space and simplifies circuit design. Available with threaded bodies, or for subplate mounting, they offer widest latitude for positioning in the system. Pressure control knobs can be placed in either of two positions. Remote control of the pressure unloading adjustment can also be utilized.

These advanced features are the result of a *quarter century* of research and manufacturing experience at Denison, by engineers who *specialize* in oil-hydraulic equipment.

Comparison quickly proves the many advantages of Denison HydrOILic Valves, as reported by users in every field. Check with Denison on any valve needs, for circuits to 5000 psi.

The DENISON Engineering Co.
1151 Dublin Road Columbus 16, Ohio

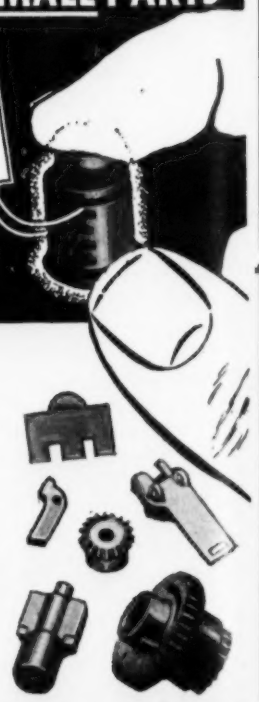
DENISON HydrOILics

▲ For more details circle NED-4819 on enclosed inquiry slip ▲

BIG SAVINGS on SMALL PARTS

SMALL Zinc Die Castings 1000 per lb. to 3 per lb.*

made in DOLLIN'S SMALL CASTING'S DEPT.



Eliminate machining and assembly operations—speed up production rates! Our special equipment makes *intricate* small castings *automatically*. Check with us on consolidating two or three simple parts—or making intricate parts at *less cost* per piece. Tooling costs are low—possible savings high. Parts are delivered completely trimmed, ready for assembly!

Write For Bulletin and Samples or Send Prints for Quotation

*Approx. range for Small Castings Dep't.

DOLLIN CORPORATION — Zinc & Aluminum Die Castings in All Commercial Sizes
612 South 21st Street, Irvington 11, New Jersey

▲ For more details circle NED-4820 on enclosed inquiry slip ▲

This free booklet tells why

DISSTON

can make your

SPECIAL STEEL PARTS

...accurately... economically!

In this booklet are pictured the completely integrated production facilities of the DISSTON CUSTOM PARTS PLANT . . . from skilled engineering . . . through actual steel manufacture and heat treating . . . to final precision machining and inspection.

These facilities are *yours* to use—to cut costs and eliminate headaches in the production of replaceable heat-treated parts to your own exacting specifications. The booklet also illustrates typical parts the DISSTON CUSTOM PARTS PLANT has produced for other manufacturers and outlines the information required when forwarding an inquiry or an order. Send for it today! No obligation, of course.

HENRY DISSTON & SONS, INC.
529 Tacony, Philadelphia 35, Pa., U.S.A.
(Canadian Factory: Toronto 3, Ont.)

For more details circle NED-4821 on enclosed inquiry slip

BARCO
High Pressure
SWIVEL JOINTS

for

HYDRAULIC SERVICE
Tubing or Pipe

NO BINDING—A Barco design advantage! "Side Flexibility" in joint compensates for misalignment; simplifies and speeds up installation.

LEAKPROOF—A choice of precision-made seals for highest pressures, temperatures, and steam or corrosive service.

SMALL, LIGHT, COMPACT—Standard models for ¼", ⅜", ½" and ⅝" O. D. tubing (A/N, flared, or Ermeto) or comparable size pipe threads. Angle or straight connections.

PRESSURE SAFE—The seal will not break or blow out suddenly. Built to 3000 psi working pressure standards, steel or aluminum. *Send for literature.*

BARCO MANUFACTURING CO.
1830F Winnemac Avenue, Chicago 40, Illinois
In Canada: The Holden Co., Ltd.

For more details circle NED-4822 on enclosed inquiry slip

FREE
FAN CATALOG

See 1952's most complete line of fans, featuring models for every commercial and industrial need. See them all in the new Emerson-Electric Fan Catalog for '52. Write today for Catalog T63.

The Emerson Electric Mfg. Co.
St. Louis 21, Mo.

EMERSON ELECTRIC
FANS • MOTORS APPLIANCES

For more details circle NED-4823 on enclosed inquiry slip

New Literature and Catalogs

Coated Abrasive Care

Armour & Co., Coated Abrasives Div.—"How to Store Coated Abrasives" is an 8-page illustrated guide for users of abrasive belts and disks. Proper storage of abrasives not only minimizes deterioration, but adds to service life of material. Practical suggestions are cited.

For more details circle NED-4824 on enclosed inquiry slip

Centrifugal Castings

Janney Cylinder Co.—There is practically no limit to the size or composition of nonferrous centrifugal castings outlined in two illustrated 4-page bulletins. One deals with finish machined products made from centrifugal castings of high tensile bronze, aluminum bronze, Alcop bronze, Monel metal, Nickeldur and other alloys. Second covers cylinder liners machined from centrifugally cast iron.

For more details circle NED-4825 on enclosed inquiry slip

Emulsifying & Detergent Agents

Hercules Powder Co.—Properties and applications of Dresinate are covered in 16-page illustrated booklet "Dresinate for Soluble Oils and Alkaline Cleaners." This series of sodium and potassium salts of rosins and resins is used as emulsifying, foaming, flotation and viscosity control agents; detergent additives; dispersants; industrial sizing compounds and other applications where the use of uniform soaps of rosin acids is indicated.

For more details circle NED-4826 on enclosed inquiry slip

Negative Temperature Coefficient Resistors

Keystone Carbon Co.—Properties, performance characteristics and application data on line of negative temperature coefficient resistance units are given in 8-page illustrated bulletin 13. Several sizes and shapes are made with tinned copper leads or with metallized surfaces for clip or pressure contact. Resistance of units varies inversely with the temperature. Composition can be varied to fit their thermal and electrical properties with needs of application.

For more details circle NED-4827 on enclosed inquiry slip

Rubber & Plastic Linings

Broadway Rubber Corp., Acme-Fisher Div.—"The Laybond Family of Protective Membranes" is title of 16-page illustrated manual of rubber and plastic linings. Included are buying guidance, corrosion resistant charts and selection data on linings for pipe and fittings, fume fans, pumps and impellers, scrap baskets, drums and tumbling barrels.

For more details circle NED-4828 on enclosed inquiry slip

Vibrating Screen Heater

Allis-Chalmers Mfg. Co.—Thermo-Deck heating unit described in 8-page illustrated bulletin 07B7812 eliminates blinding of vibrating screens handling fine, moist materials that have tendency to adhere to the surface. Advantages reported for this device are increased screening tonnage output, minimum of downtime to clean screens and increased life of screen cloth.

For more details circle NED-4829 on enclosed inquiry slip

LAWLOR MOP WRINGERS
FOR EASIER MOPPING GET A LAWLOR NO. 2

EASIEST turning wringer made: there are bearings at ends of rollers.

EASY to bring rolls together: foot lever is perfectly balanced.

Copied but never Duplicated!

EASY to move wringer: self-adjusting front casters raise metal feet from floor when you're ready to go.

The **LAWLOR No. 2** accommodates any standard round, galvanized pail up to 16-quart capacity. Net weight of wringer—23 pounds.

LAWLOR No. 6 TWIN is like the No. 2 Wringer in general construction, but accommodates two pails.

Write for Catalog of Mop Wringers, Tanks, Cleaning Equipment for every kind and size floor.

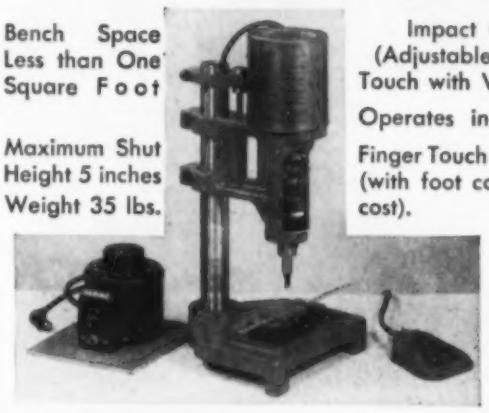
S. C. LAWLOR CO.
Quality Floor Equipment for 50 Years
131 N. ABERDEEN ST. CHICAGO 7, ILL.

For more details circle NED-4830 on enclosed inquiry slip

CUT PRODUCTION COSTS
MIGHTY MIDGET PUNCH PRESSES

Bench Space Less than One Square Foot

Maximum Shut Height 5 inches
Weight 35 lbs.



Impact One Ton (Adjustable to Feather Touch with Variac control)

Operates in 1/6 Second

Finger Touch Control switch (with foot control at extra cost).

BETTER FASTER CLEANER WORK

Just plug in 110 V.

This compact little impact press can solve your production problem. Designed for cutting, crimping, riveting, marking, stamping, perforating and for subassembly work, it is the solution in many cases because of its size, low first cost and low upkeep. Investigate today!

PEACOCK METAL PRODUCTS, Inc.
752 Hyde Park Ave. Hyde Park 36, Mass.
Dealers inquiries invited, there are still a few open territories.

For more details circle NED-4831 on enclosed inquiry slip

it feels heavier

... and heavier

and HEAVIER...

WHEN YOU HANDLE IT BY HAND

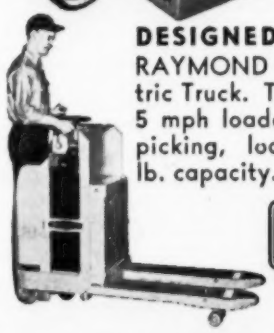
USE

RAYMOND

Hydraulic
PALLET LIFT TRUCKS

- Let one man do the work of two men or more with a RAYMOND Hydraulic Pallet Lift Truck. You'll save time, save manpower, save money!
- What's the secret? Hydraulic power does the heavy lifting. Just a few pumps on the foot pedal and your load is set for smooth, easy hauling.
- RAYMOND Pallet Trucks squeeze into tight quarters . . . feature effortless pallet entry. Lightweight model shown here has 2,000 lb. capacity. Also available in Heavy Duty models with 4,000 or 6,000 lb. capacities.

MODEL L2P



DESIGNED FOR FAST HANDLING
RAYMOND Low-Lift Rider-Type Electric Truck. Travels up to 6 mph empty, 5 mph loaded. For long hauls, stock picking, loading, unloading. 4,000 lb. capacity.

RAYMOND
Electric Industrial Trucks
Hydraulic Elevating Equipment

Send for Bulletins

The RAYMOND CORPORATION
Formerly LYON-Raymond Corporation
4174 Madison Street, Greene, N.Y.

Gentlemen: Please send me Bulletin 207, showing your full line of Hydraulic Lift Trucks. Also Bulletin 750 on your new Low-Lift Electric Truck.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-4832 on enclosed inquiry slip

NO OTHER OIL HYDRAULICS PERFORM LIKE "COMMERCIAL" OIL HYDRAULICS

Operating pressures recommended up to 1500 p.s.i.

CATALOG H-6 AVAILABLE ON REQUEST

THE COMMERCIAL SHEARING AND STAMPING Co.
YOUNGSTOWN 1, OHIO

"COMMERCIAL"

For more details circle NED-4836 on enclosed inquiry slip

NON-SINKABLE BOATS PROVE

GPX EFFICIENCY!

Beauty, toughness, smoothness, low maintenance . . . these are the properties the Welin Boat Co. sought and found in GPX. Used for bulkheads, cockpit and cabin lining, hatches, and exterior paneling, GPX proved itself superior to any other material—regardless of cost.

GPX is a top-grade exterior Douglas Fir Plywood, bonded and surfaced with a layer of phenolic resin plastic under heat and pressure that makes the hard, dense surface part of the plywood itself.

CHECK THESE GPX PROPERTIES:

- ✓ WEATHERPROOF . . . unaffected by sun, rain, or freezing.
- ✓ WATERPROOF . . . 20 times more resistant to water absorption than ordinary plywood.
- ✓ ABRASION RESISTANT . . . 10 times as abrasion resistant as ordinary plywood in dry tests . . . 50 times when wet.
- ✓ CHEMICAL RESISTANT . . . resists hydrocarbons, salt, soap, oils, hydrochloric acid, sulphuric acid, organic solvents, etc.
- ✓ VERMIN RESISTANT . . . impervious to termites, marine borers, mold and fungi.
- ✓ SMOOTH AND STRONG . . . stronger than steel (weight for weight).
- ✓ EASY-TO-WORK . . . easy to saw, drill, sand, nail, rivet, glue or paint.
- ✓ VARIETY OF GRADES AND WEIGHTS . . . comes in 4 grades, 3 thicknesses. Standard panel size: 4 x 8 ft. Longer lengths on special order.

Get full details today!

GEORGIA—PACIFIC PLYWOOD COMPANY
616-5A North Capitol Way, Olympia, Wash.

OFFICES OR WAREHOUSES IN: Augusta, Birmingham, Boston, Chicago, Columbia, Detroit, Lancaster, Louisville, Memphis, Nashville, Newark, New Hyde Park, Olympia, Orlando, Philadelphia, Pittsburgh, Providence, Raleigh, Richmond, Savannah, Vineland.

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Please send me the GPX Use Folder.
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FIRM NAME.....
.....
FIRM ADDRESS.....
CITY.....STATE.....
POSITION.....

For more details circle NED-4837 on enclosed inquiry slip

New Literature & Catalogs

Fork Lift Trucks

Towmotor Corp.—Series of three broadsides are compiled to explain specific features and capabilities of company's fork lift truck. No. 1 offers detailed engineering and illustrated data on truck's construction features. No. 2 covers truck's clutch, transmission, universal joint, drive axle steering, braking, etc., while No. 3 reveals truck's features from mechanic's view point.

For more details circle NED-4838 on enclosed inquiry slip

Die Casting Machines

Lake Erie Engineering Corp.—Contained in 3-page folder on line of die casting machines is general information, illustrations and tabulated specifications. Production advantages of the Pressure Pac and Wedge Cam Toggle features are included. Machines are available in 10 models, ranging from 100 to 1000-ton capacity.

For more details circle NED-4839 on enclosed inquiry slip

Motors & Controls

Westinghouse Electric Corp.—Application of motors and their controls to the chemical industry is theme of 32-page illustrated booklet B-4792. Eight sections treat such problems as corrosion, hazardous locations, outdoor service, minimum space and weight, centralized control and coordinated application of motors and controls.

For more details circle NED-4840 on enclosed inquiry slip

Abrasive Shot, Grit & Powder

Cleveland Metal Abrasive Co.—Data on chilled iron shot and grit, normalized shot and grit, drawn steel cleaning and peening shot, and iron powder abrasives are contained in 8-page illustrated catalog 152. Uses, application and selection of abrasive for various cleaning, peening and other processes are outlined.

For more details circle NED-4841 on enclosed inquiry slip

Lead Clad Steel & Copper

Knapp Mills Inc.—"History and Development of Ferrolum Lead Clad Steel and Cupralum Lead Clad Copper" is title of 22-page illustrated treatise on these materials that have widespread application for vessels, coils, tanks, x-ray equipment, processing units and similar equipment. Materials are available in rod, bars, strips, angles, channels, sheets and other forms.

For more details circle NED-4842 on enclosed inquiry slip

Forced Recirculation Steam Generator

Clayton Mfg. Co.—Details of specific industrial applications of the automatic, self-contained Clayton Steam generator are given in 12-page brochure C-10.1. Use of single and multiple installations for supplying dependable volume of steam at constant temperature and pressure levels is described. Charts and cutaway drawings show recirculation principle.

For more details circle NED-4843 on enclosed inquiry slip

Gasoline Cutting Torch

Steel News Industries, Inc.—10-page illustrated information file deals with the new Browning gasoline hand cutting torch. Operating principle, applications and operating procedures are related in detail.

For more details circle NED-4844 on enclosed inquiry slip

Solve CONTROL PROBLEMS with TELEFLEX

Are mechanical remote controls your problem? Then consider these advantages of Teleflex:

- Efficient in both tension and compression
- Unlimited in rotary motion
- Assembled from stock parts
- Rugged and flexible
- Easy to install and maintain

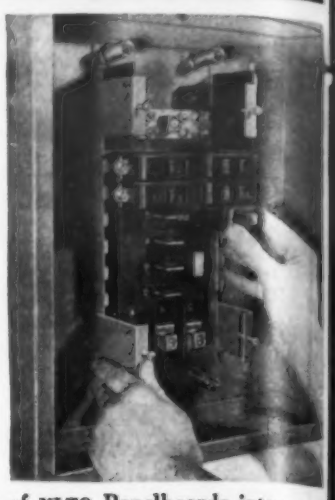
Our engineers will cooperate with you on any problem involving mechanical remote controls.

TELEFLEX INCORPORATED
248 WEST WINGOHOCKING STREET
PHILADELPHIA 40, PA.

WRITE FOR CATALOG 300 C

For more details circle NED-4845 on enclosed inquiry slip

NEW CLASS I PANELBOARD IS FIRST WITH PLUG-IN BREAKER



Trumbull's new line of NLTQ Panelboards introduces the first *plug-in* circuit breaker with quick-make, quick-break. Also: thermal-magnetic protected, physically interchangeable breakers.

OTHER NEW FEATURES
Interior—spring-mounted, self-aligning.
Molded-in-plastisol busbar and stab assembly.
Sequence phasing—in all sizes

Write for Bulletin TEB-14, THE TRUMBULL ELECTRIC MANUFACTURING COMPANY, Plainville, Conn.

TRUMBULL (T) ELECTRIC
Department of General Electric Company, Plainville, Conn.

For more details circle NED-4846 on enclosed inquiry slip

FULLER FLOOR BRUSHES CUT COSTS BY CUTTING STROKES

With labor costs running as high as $1.25 an hour for maintenance men, the cleaning tools you put in their hands become mighty important. Supply them with Fuller Floor Brushes and cut your maintenance costs. Let one stroke do the work that formerly required two or three. With Fuller Floor Brushes you get a clean sweep with every stroke, no backtracking. For specifications write to . . .

SHIPPED FROM NINE DISTRIBUTION POINTS

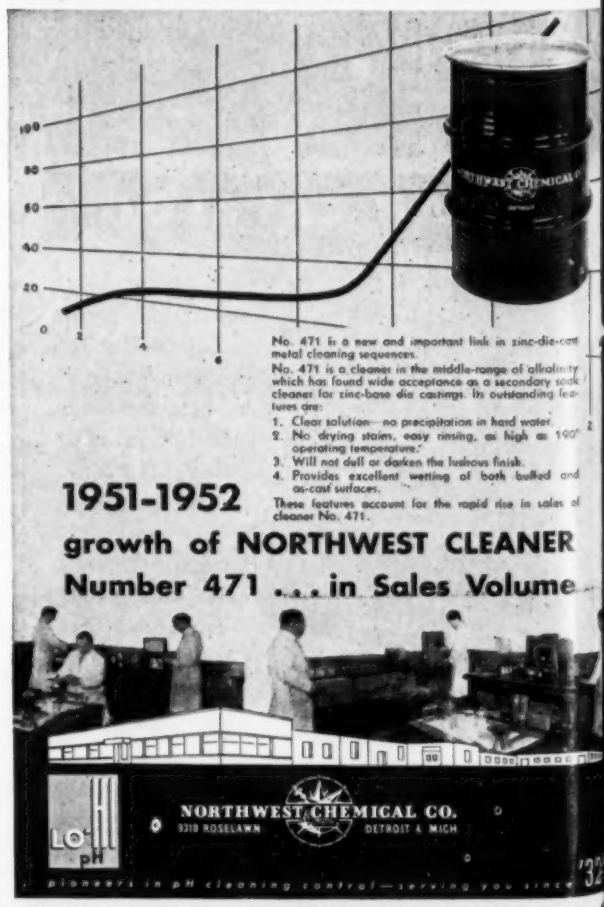
INDUSTRIAL DIVISION FULLER BRUSH

At home... in business, too

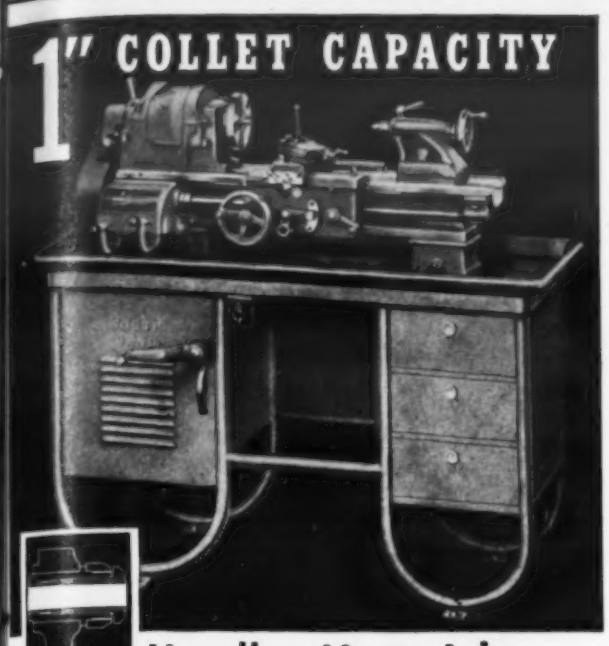
3530 MAIN STREET
HARTFORD 2, CONN.

IN CANADA: FULLER BRUSH CO., LTD., HAMILTON, ONT.

For more details circle NED-4847 on enclosed inquiry slip



For more details circle NED-4848 on enclosed inquiry slip



Handles More Jobs

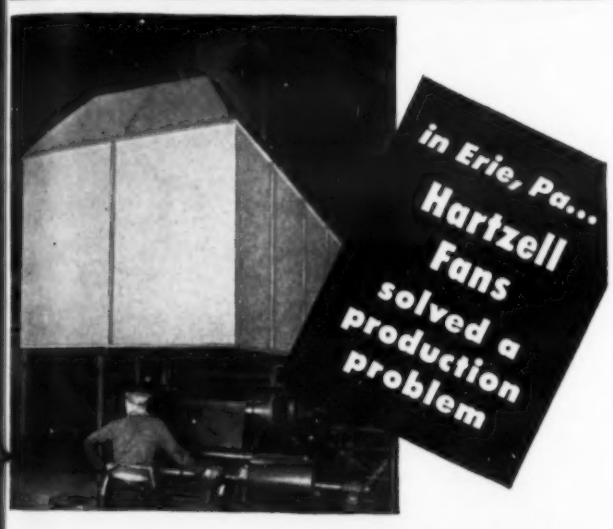
1" collet and 1⅜" spindle bore give this lathe the capacity for a greater variety of jobs. Its 48 power feeds for turning, 48 for facing and 48 for threading give you everything you need for any job. And its accuracy and rugged construction assure precision work through years of dependable service. *Write for catalog.*

South Bend 10" x 3', 1" Collet Capacity, Quick Change Gear Precision Bench Lathe (illustrated above).

Building Better Tools Since 1906

SOUTH BEND LATHE SOUTH BEND 22, INDIANA

For more details circle NED-4849 on enclosed inquiry slip



Noxious fumes from machines used for coating roofing materials were crippling production in this Erie, Pa. plant. Under certain weather conditions, the plant was forced to close down completely. All production stopped, money and time were lost.

Then the Hartzell field engineer was called in. He made a careful survey and specified Hartzell ND36-F-BDS Belt Drive Duct Fans, especially constructed for high temperature service. These fans did the trick, and are saving this manufacturer real money. Why not find out what Hartzell fans and blowers can do to boost your plant's production? Write now for information.

HARTZELL PROPELLER FAN CO.
DEPT. G DIV. OF CASTLE HILLS CORP. PIQUA, OHIO
engineering representatives in principal cities

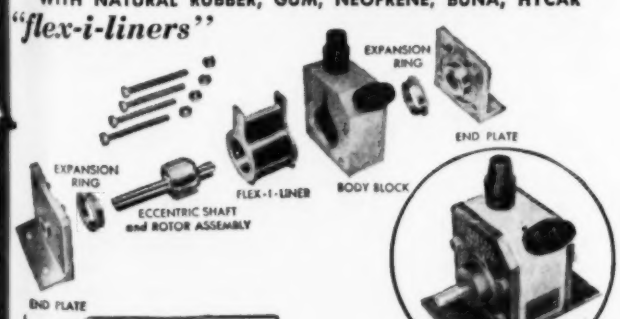
For more details circle NED-4850 on enclosed inquiry slip

NEW FRACTIONAL to 20 G.P.M.

POLYETHYLENE PUMPS

WITH NATURAL RUBBER, GUM, NEOPRENE, BUNA, HYCAR

"flex-i-liners"



ESPECIALLY DESIGNED TO HANDLE HCl, HF, NaOH, H_2SO_4 DISTILLED H_2O, $FeCl_3$, $Ca(OH)_2$ and many others

Fluid only contacts outer surface of "FLEX-I-LINER" and inner surface of body block. 35 combinations of rubber and plastic "flex-i-liners" and pump body blocks. Models available from fractional to 20 G.P.M., Vinyl and Compar "flex-i-liners" also available in pumps to 5 G.P.M. capacities. Widely used in chemical, food, pharmaceutical and other process industries—wherever non-contaminating pumping is required. Excellent for slurries. Write for literature.

FLUID NEVER TOUCHES METAL

NO STUFFING BOXES
NO GASKETS
NO VALVES
SELF LUBRICATING

VANTON PUMP CORP.
EMPIRE STATE BLDG., Dept. NE-5, New York, N. Y.

VANTON NON CORROSIVE CONTAMINATING *flex-i-liner* PUMPS

For more details circle NED-4851 on enclosed inquiry slip

New Literature & Catalogs

Prefabricated Steel Buildings

Brookville Mfg. Co.—Structural features of Unibilt prefabricated insulated steel buildings are shown in simplified architectural form in illustrated bulletin 107. Standard units that can be used in single or multiple series for erection of almost any size building are shown, along with such components as windows, doors and openings to fit any requirement.

For more details circle NED-4852 on enclosed inquiry slip

Synthetic Material Properties

Resistoflex Corp.—Fluorocarbons and silicone rubber are among the highly resistant and flexible synthetic materials described in 4-page illustrated folder "For Out-of-the-Ordinary Engineering with Synthetics." Information on physical, electrical and chemical properties of Fluoroflex products made of Teflon, Compar and Kel-F is presented.

For more details circle NED-4853 on enclosed inquiry slip

Electric Power Drives

Sterling Electric Motors, Inc.—Design and application data on complete line of electric power drives are contained in 20-page illustrated catalog No. 174. Descriptive information is presented on variable speed drives, geared motors and constant normal speed motors in drip-proof, splashproof, totally-enclosed and pipe-ventilated designs.

For more details circle NED-4854 on enclosed inquiry slip

Miniature Panel Indicators

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—4-page illustrated catalog sheet 770 describes the operation of miniature indicating panel receiver that provides manual loading and remote index settings for industrial control systems.

For more details circle NED-4855 on enclosed inquiry slip

Listing Process

Remington Rand Inc.—Flexoprint, a new method of preparing directories, catalogs, indexes, price lists and parts records, is subject of 6-page illustrated bulletin KD610. Panels are made up of typed strips and copies are reproduced by photo-offset printing.

For more details circle NED-4856 on enclosed inquiry slip

Military Variable Resistors

Chicago Telephone Supply Corp.—Detailed technical data on complete line of military variable composition and wire wound resistors are given in data sheet 160. Drawings of each type are included, as are performance characteristics, JAN-R-94 and JAN-R-19 types and three high temperature, high stability resistors are listed.

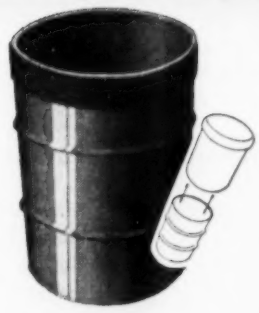
For more details circle NED-4857 on enclosed inquiry slip

Air Motors & Routers

Onsrud Machine Works, Inc.—Air turbine motors and routers with attachments for machining wood, plastics and noferrous metals are detailed in 8-page illustrated bulletin No. 1138. Motors are available in ¼ to 2-hp capacities with speeds from 22,000 to 50,000 rpm. Portable routers are supplied in standard kits, ready for use.

For more details circle NED-4858 on enclosed inquiry slip

"DROP-IN" RUBBER LININGS FOR 55 GALLON DRUMS



Made of special resistant rubber, these inexpensive and handy barrel liners are unequaled for use as temporary or emergency storage tanks of acid or alkaline solutions or for quickly improvised still tanks for plating experimentation. 22" in diameter, 40" deep, with a .050 wall, the liner fits a 55 gallon drum perfectly and holds itself in position by an overhanging lip. No difficult installation—simply drop into the drum and fasten the lip over the side and you have rubber lined drum ready for use.

The lining is highly suited to handle sulphuric, oxalic, phosphoric, muriatic and diluted hydrofluoric acids, as well as alkaline and acid solutions, for brass, cadmium, silver, tin, zinc, gold, nickel and copper.

Order your supply today at the low price of $19.75 each, f.o.b., Detroit. Immediate shipment.

Pioneer of A Better Way in Plating

THE *Udylite* CORPORATION
DETROIT 11, MICHIGAN

For more details circle NED-4859 on enclosed inquiry slip

METAL DISINTEGRATION!
by THOMAS METALMASTER

TOOL STEEL CUTTING · TOOL & DIE REPAIRS · TAP REMOVAL · DRILL PULLING

WRITE TODAY!
There's a technical engineer in your area that'll give an on the spot demonstration in your plant at your convenience.

WARNER DIVISION:
CLINTON MACHINE COMPANY
21535 GROESBECK HWY.
DETROIT 5, MICHIGAN

For further technical information relative to the famous Thomas Metalmaster Disintegrators write to the main office listed above and prompt service will be given your inquiry.

For more details circle NED-4860 on enclosed inquiry slip

Get Laboratory Accuracy in Formulas . . . at the *Production Level!*

with

ROCKWELL *Industrial* METERS

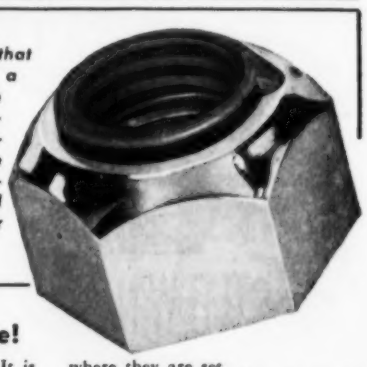
Sizes ⅛" to 3" in a variety of suitable materials. Option on type of register. Automatic shut-off control available.

The liquid content in the formula so carefully developed in your laboratory can be exactingly controlled in production when Rockwell meters are assigned to the job. You'll get the highest measurement accuracy while saving materials, labor and money. In addition your accountants will gainfully use the records Rockwell meters provide for inventory and cost control. Write for full details.

ROCKWELL MANUFACTURING COMPANY
Dept. C-3, 400 N. Lexington Ave., Pittsburgh 8, Pa.

For more details circle NED-4861 on enclosed inquiry slip

★ *"It is believed that the Locknuts received a more severe test than they would have received under service conditions and that the stresses set up by the direct hammer test would have sheared a cotter pin."*



INVESTIGATE
The Statement Above!

That statement is not ours. It is the statement in a report on a grueling and authoritative test made on Security Locknuts.

If you have been disappointed in the performance of ordinary locknuts and have a vibration problem we would like to show you the whole report from which the above statement was taken.

You will find that—

- Security Locknuts stay put where you wrench them regardless of vibration that may destroy the bolt itself.
- They are self-locking. They do not require bolt tension but stay where they are set.
- They can be adjusted or reapplied any number of times without losing locking power or impairing threads.
- They require no more time to install than an ordinary nut—no extra parts or operations—nothing to line up—nothing to shear.

Once in place no Security Locknut has ever been set spinning. We want you to challenge us to solve your toughest fastener problem. There is a size for the job—⅜" to 3". Let us show you the report on Security Tests. Fill out and send the coupon.

Security

SECURITY LOCKNUT CORP.
North Ave. and 15th Ave.
Melrose Park, Ill.

THE NUT YOU CAN'T SHAKE LOOSE

Please send me without obligation:
☐ A Thread Tolerance Chart.
☐ We have a fastener problem and would like to know more about Security Locknuts.

Company Name .....
Address .....
Town ..... Zone ..... State .....
Signed .....

For more details circle NED-4862 on enclosed inquiry slip

New Dual V-Belt Drive

SYNTRON

Portable

ELECTRIC SAW

The new Dual V-Belt Drive eliminates gears—provides shock-absorbing, velvet-smooth operation for faster, cleaner cutting. Cuts and rips wood; cuts and scores brick, tile and other materials with 6000 RPM full load blade speed.

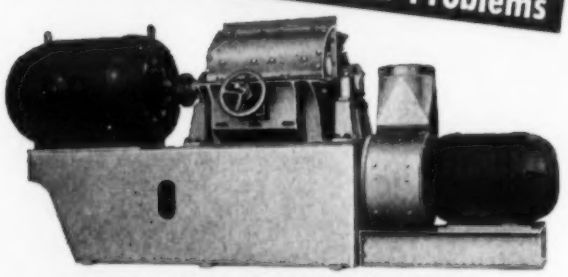
Its high speed feeds the blade in—no need to push or ram. 2-11/16" cut with an 8½" blade—weighs 19 lbs.

Write For FREE Catalog Folder

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-4863 on enclosed inquiry slip

DIXIE® PROCESS GRINDERS
Solve Today's Production Problems



Dixie Process Grinders are available in 15 to 250 H. P. capacities for a large variety of grinding applications.

The sure-fire remedy for processors in today's production difficulties is the Dixie Process Grinder. Rugged and dependable, the Dixie grinds better . . . faster . . . at less cost. Manufacturers who set the pace are solving the urgent industry problem of production versus manpower with Dixie Process Grinders.

Plan now to cut your grinding costs . . . step up capacity . . . improve quality . . . increase sales and profits. Write today for all the money-saving facts.

JOHN J. WOODS & SONS
320 Board of Trade • Kansas City 6, Mo.

For more details circle NED-4864 on enclosed inquiry slip

SUPERSENSITIVE BALANCER!

New CROWN BALANCING WAYS

NO CENTERING NEEDED!

• Eliminates trial and error method of detecting "heavy spots" in rotating parts. Free turning discs, mounted on ball bearings insure least friction and highest possible sensitivity. Load Capacities of 400 to 5000 lbs., swing 10" to 60". Easily portable.

Gives Quick Static Balance of
ARMATURES
FLY WHEELS
CRANKSHAFTS
FANS, etc.

WRITE FOR DETAILS

CROWN INDUSTRIAL PRODUCTS
406 Borden Avenue
Sycamore, Ill.
Please send catalog data and prices on CROWN Balancing Ways.
Name
Company
Address
City Zone State

For more details circle NED-4865 on enclosed inquiry slip

New Literature & Catalogs

Steam, Air & Gas Turbines

Pyle-National Co.—Six illustrated 4 and 8-page bulletins contain complete information on line of high-efficiency impulse type steam, gas or air turbines for mechanical drive applications in industrial plants and equipment. Performance charts are included on turbines in sizes ranging from ¼ to 120 hp.

For more details circle NED-4866 on enclosed inquiry slip

Heavy Liquid Pumps

Allis-Chalmers Mfg. Co.—Nine sizes of PW paper stock pumps with capacities from 175 to 10,000 gpm at heads to 140 ft are described in 8-page illustrated bulletin 08B7112A. Pumps will handle high consistency pulp and heavy liquors, corrosive liquids with suspended solids and similar fluids.

For more details circle NED-4867 on enclosed inquiry slip

Abrasive Cut-Off Wheels

Raybestos-Manhattan, Inc., Manhattan Rubber Div.—Grade recommendations, cutting performance data and operating suggestions for Manhattan cut-off wheels used on Stone Machinery Co. equipment are presented in illustrated bulletin 6921.

For more details circle NED-4868 on enclosed inquiry slip

Automatic Water & Steam Valves

Golden Anderson Valve Specialty Co.—8-page illustrated bulletin G-3 describes cushioned automatic water and steam valves. Design, operation, sizes and capacities are given for float, altitude, check, solenoid operated, reducing, relief and nonreturn valves.

For more details circle NED-4869 on enclosed inquiry slip

Heavy Duty Lubricant

Climax Molybdenum Co.—Moly-Sulphide is described as a lubricant that performs effectively under conditions where other lubricants have failed in 44-page illustrated bulletin "A Little Does a Lot." Applications, form of lubricant and other data are given on use in assembling, cold drawing, cold forming, disassembling, hot forming, metal cutting, press fitting and other operations in aircraft, automobile, bearing, gear, light industry, utility and many other services.

For more details circle NED-4870 on enclosed inquiry slip

Fluid Power Circuits

Logansport Machine Co.—32-page illustrated bulletin "The Circuit Rider" is pocket-size manual on basic designs in fluid power circuits. Possibilities afforded by different types of circuit designs are discussed. In addition to actual circuit diagrams, booklet includes JIC standard symbols for pneumatic lines, motors, cylinders, valves and operating methods.

For more details circle NED-4871 on enclosed inquiry slip

Protective Sleeves & Boots

A & A Mfg. Co.—Complete details of Cortite-Sleeve protection as applied to hydraulic piston rods, machine ways, drive shafts, lead screws and gun mount slides are given in 4-page illustrated bulletin AH-2. Both telescopic bellows-like sleeves and boots are made of Neoprene material that is impervious to oil, chips, grease and water.

For more details circle NED-4872 on enclosed inquiry slip

Record Copying

Remington Rand Inc.—How the Portograph provides a fast inexpensive means for making copies of records, drawings, engineering plans and other important documents is told in illustrated brochure. Machine will reproduce accurately anything that is written, drawn, typed or photographed regardless of color of ink, crayon or pencil or quality of paper.

For more details circle NED-4873 on enclosed inquiry slip

Automatic Combustion Control

Bailey Meter Co.—24-page illustrated bulletin No. 1023 contains detailed information on automatic combustion control techniques for oil and gas-fired boilers. Illustrations, descriptions and diagrams cover nine typical firing methods and 16 major control equipment components.

For more details circle NED-4874 on enclosed inquiry slip

Carbide & Steel Gage Blocks

Fonda Gage Co.—"Precision in Millionths" is stressed in text of 1952 edition of Fonda gage block catalog. Described and illustrated are complete lines of Lifetime-carbide and steel gage blocks, with prices of both individual gage blocks and sets.

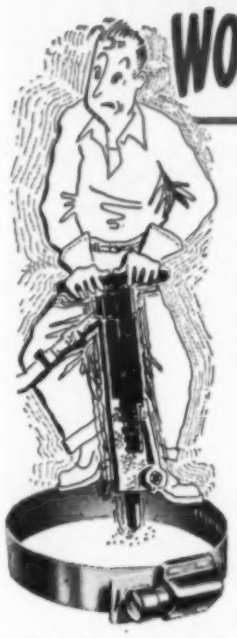
For more details circle NED-4875 on enclosed inquiry slip

Chemical Process Pumps

Food Machinery & Chemical Corp., Peerless Pump Div.—Complete description, cutaway and exploded illustrations and dimensional drawings pertinent to Peerless Type DS oil and grease lubricated chemical process pumps are contained in 8-page bulletin B-1600.

For more details circle NED-4876 on enclosed inquiry slip

AERO-SEAL WORM-DRIVE HOSE CLAMPS
WON'T SHAKE LOOSE!



Use of stainless steel subject to government regulations.

Wherever you have to clamp a hose connection tight . . . or wherever you want to lock two objects of any shape together in an unshakeable bond . . . your best bet is AERO-SEAL.

Threads of steel worm engage deep into slots in stainless steel band—hold tight under extreme vibration in automotive, aircraft and industrial applications. CAN'T SHAKE LOOSE.

One-Hand Installation
Install an Aero-Seal any place you can reach with thumb and one finger. Self-feeding when band engages worm threads. Thumb-grip and screwdriver types.

Re-use Again and Again
When hose is worn you RE-USE the same Aero-Seal again and again. RE-USE Aero-Seals on temporary clamping jobs—they conform to any shape without damaging band.

"Aero-Seal"® WORM DRIVE HOSE CLAMPS
ANOTHER BREEZE MARK PRODUCT
BREEZE CORPORATIONS, INC.
41 South Sixth St. Newark, N. J.

For more details circle NED-4877 on enclosed inquiry slip

SEND FOR THE NEW P 40 PAGE WATER HEATER CATALOG

p-k catalog No. 202 provides you with a simple, rapid means of selecting the correct hot water heater for forced circulation. Capacities from 95 to 101,000 gph. Steam pressures range from 0 to 100 psig. Standard "U" Tube Heaters are available in 2- 4- or 6-pass construction. Water temperatures range from 40° to 100°F. inlet and 80° to 300°F. outlet.

other TAB INDEX FEATURES: Condensate Cooler tables • Dishwater Booster Heater tables • Gravity circulation tables • Hot Water Service Heater tables • Pressure drop tables • Typical piping arrangement

the P Patterson-Kelley Co., Inc.
127 BURSON ST., EAST STROUDSBURG, PENNA.

For more details circle NED-4878 on enclosed inquiry slip

Ever since you were knee-high to a hop-toad, you've heard about America's wonderful *natural resources*—the bountiful fields, the towering timber, the boundless water power, and the wealth of mineral treasures that lie buried in the ground.

Is it because America has *more* natural resources, that Americans enjoy the world's highest standard of living? No—many countries have as much—some have more. Then is it because Americans *do* more with what they've got?

Yes! And the reason is as plain as the nose on your face. It's because Americans are free to develop their natural resources—and their natural resourcefulness—in the wholesome climate of *open and strenuous COMPETITION.*

Competition—not "regimentation"—is what eggs a man on to do his best.

Competition—not government control—is what urges a business to give its customers ever greater value for their money.

So let's say "NO SALE" to the *ism* peddlers who would have us swap our U. S. A. system of free competition for their "planned" regimentation—trade our U. S. A. freedom and plenty for their serfdom and poverty!

This report on PROGRESS-FOR-PEOPLE is published by this magazine in cooperation with National Business Publications, Inc., as a public service.

THE COMPETITIVE SYSTEM DELIVERS THE MOST TO THE GREATEST NUMBER

For more details circle NED-4879 on enclosed inquiry slip

WHY BUY CONTAINERS?

Let the TOTE SYSTEM handle
→ RAW MATERIALS TO YOUR PLANT
→ FINISHED PRODUCTS TO CUSTOMERS
→ PRODUCTS IN-PLANT

ONE TOTE BIN
WILL DO THE WORK OF
20,000 BAGS!
TOTE SYSTEM saves labor, product loss, bag cost and it's sanitary!
Let us make you a proposal applying the Tote System.
Write Dept. K

TOTE SYSTEM, INC.
720 So. 7th Street
BEATRICE, NEBR.

For more details circle NED-4880 on enclosed inquiry slip

in just 3 seconds

. . . you can read any surface temperature in your plant . . . accurately and easily . . . with the Alnor Portable Pyrocon.

Compact in size, complete in precision design and workmanship, this rugged instrument assures the highest standards of speed, accuracy and dependability. You can take temperature readings on materials in process, the finished product or the heated equipment itself—in as few as 3 seconds!

Alnor Portable Pyrocons come in scale ranges to 2000° F., with thermocouples for every application. You'll find full details on the Pyrocon exactly suited to your operations in Bulletin 4257. Send for your copy now. Write: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-4881 on enclosed inquiry slip

BROOKS SINCE 1876 Laboratory Developed

PLANT TESTED
WATER TREATMENT SERVICE
IS COMPLETE

Write for Descriptive Technical Data

- Boiler Water Treatments
- Water Line Treatments
- Cooling Water System Treatments
- Brine System Treatments
- Waste Water Treatments
- Zeolite Softener Treatments
- Consulting Service

Brooks stands ready to correct any water difficulty you have...large or small...from *raw* water coming in, to *waste water* going out. Brooks Service Engineers are available anytime, anywhere for consultation, without obligation.

BROOKS Chemicals, Incorporated
3304 East 87th St. Cleveland, Ohio
Plants at CLEVELAND, OHIO and HAMILTON, ONTARIO
Offices in Principal Industrial Cities
QUALITY SERVICE THROUGH SCIENTIFIC RESEARCH

For more details circle NED-4882 on enclosed inquiry slip

New Literature & Catalogs

Air-Solved Production Problems

Mead Specialties Co.—Thirty-nine (39) case histories concerning production problems that have been solved by means of semiautomatic or automatic combinations of various Mead air-operated devices are contained in 16-page illustrated brochure "Air Power at Work." Each different combination of work feeders, air presses, timers, valves and other equipment is pictured and described.

For more details circle NED-4883 on enclosed inquiry slip

Masonry Water Repellent

Flexrock Co., Building Maintenance Div.—Flexseal silicone base water repellent, a development for application on brick, concrete, sandstone, limestone, stucco, asbestos-cement combinations, cement base paints and similar compositions, is subject of 4-page bulletin. Material penetrates surface, yet allows it to breathe. Technical data and instructions are included.

For more details circle NED-4884 on enclosed inquiry slip

An Aid to Floor Matting Selection

D. W. Moor Co.—Offered as an aid in the selection of the proper types of floor matting is 8-page illustrated brochure which covers all types of mats and their function. It shows how your company can cut cleaning costs, promote sanitation, reduce redecorating costs, prevent accidents, minimize breakage and increase efficiency by retarding fatigue.

For more details circle NED-4885 on enclosed inquiry slip

Constant Voltage Transformers

Sola Electric Co.—22-page illustrated catalog CV-142 is up-to-date cross reference to constant voltage transformers. It is complete guide to both standard regulators and four new types, the harmonic neutralized, plate and filament, adjustable harmonic neutralized and the television receiver types. Section titles are: consolidated listing, general description, need for voltage regulation, specifications, operating data, special custom designs and other Sola products.

For more details circle NED-4886 on enclosed inquiry slip

Steel Industrial Springs

Sandvik Steel, Inc., Sandsteel Spring Div.—Steel industrial springs made in spiral, flat reverse tempered and crosscurved qualities and used in clock mechanisms, motion picture cameras, motors, office machines, recording and timing devices are subject of illustrated 20-page brochure "Sandsteel Springs for Dual Power." Booklet also pictures Sandsteel facilities according to department.

For more details circle NED-4887 on enclosed inquiry slip

Conveyors & Related Equipment

Spiral-bound brochure "Island Conveying Equipment," available by request on company letterhead, contains information and illustrations of all equipment made by company, as well as a photographic story of its facilities and personnel. Pictures of 119 equipment installations are shown. Products covered include Styl-O-Matic and Styl-O-Veyor tables of various types, conveyors, Unitized conveyors, belt conveyor drive unit, etc. Write to Island Equipment Corp., 27-01 Bridge Plaza N., Long Island City 1, N. Y.

For more details circle NED-4888 on enclosed inquiry slip

timing.....
from .1 second to 5 or more minutes

easily mounted in any position

AN AGASTAT
TIME DELAY RELAY for every requirement

A'G'A 1027 NEWARK AVE., ELIZABETH 3 NEW JERSEY

A'G'A AGASTAT TIME DELAY RELAY · A'G'A STIMSONITE REFLECTORS · A'G'A AIRPORT LIGHTING · A'G'A MARINE LIGHTING EQUIPMENT

For more details circle NED-4889 on enclosed inquiry slip

DAV-SON CORK-BACKED BULLETIN BOARDS

DAV-SON indoor and outdoor style Bulletin Boards provide attractive displays for up-to-the-minute announcements and posters. Your choice of hardwood or metal frames, with or without locking glass doors, illuminated or non-illuminated.

"THE SAFETY DIRECTOR"

Flashing display is a constant warning to employees to avoid accidents. Changeable letters permit timely safety messages to be set up as often as required. Definite improvement in safety records has been noted in plants using "The Safety Director."

Write for complete information regarding DAV-SON — Cork Bulletin Boards and Directories and the famous "Safety Director."

Dept. NE.

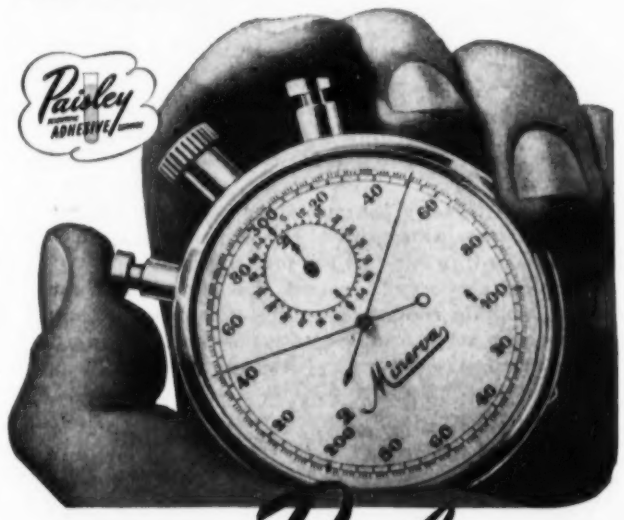
Ask for Bulletin "A"

DAV-SON

A. C. DAVENPORT & SON, INC.
ESTABLISHED 1932
311 N. DESPLAINES ST., CHICAGO 6, ILL.

For more details circle NED-4890 on enclosed inquiry slip

WHEN Split Second PERFORMANCE IS ESSENTIAL..



USE Paisley RESIN ADHESIVES

THINK of having at YOUR command stable, *laboratory controlled,* prepared Liquid Resin Adhesives that *set in split seconds* . . timed to match machine motions with exacting mechanical precision! They will give you an entirely new conception of speed and efficiency in any packaging, labeling, sealing, fabricating or manufacturing operation.

GET THIS VALUABLE INFORMATION NOW!

All users of Resin Adhesives *need* the new Paisley Resin Adhesive Bulletin No. 23. It will give you practical, *usable* information never before available to Resin Adhesive users. Valuable technical aspects are explained in language any layman can understand. No cost or obligation is involved. Be sure to use your company letterhead when writing for your copy.

TEAR OUT . . FASTEN TO LETTERHEAD AND MAIL TODAY!

PAISLEY PRODUCTS INC., 1770 Canalport Ave., Chicago 16, Ill.

Gentlemen: Without obligation, please send me the new Paisley Technical Service Bulletin No. 23.

☐ We have a special Gluing problem. Send us your Adhesive Operation Data Sheet. (You fill in and return for Laboratory recommendation.)

FIRM _____ BUYER _____

STREET _____

CITY _____ STATE _____

PAISLEY PRODUCTS INCORPORATED
DIVISION OF MORNINGSTAR, NICOL, INC.
1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st ST., NEW YORK 19, N.Y.
Manufacturers of Glues • Pastes • Resin Adhesives • Cements and Related Chemical Products

For more details circle NED-4891 on enclosed inquiry slip

• Up go parts, materials, assemblies or equipment. There's a hoisting, load handling job in virtually every kind of industry and every field of trade.

The right type of hoisting equipment for the job means maximum efficiency — safety. To get equipment best suited to the "operation up" requirements, it's good policy to contact David Round & Son. Building hoisting equipment has been a David Round specialty for over 80 years.

David Round standard unit equipment includes Chain Hoists, Electric Hoists, Traveling Cranes, Trolleys and Winches. General Catalog No. 81 gives full information. David Round & Son, 35025 Aurora Road, Cleveland 22, Ohio.

Manufacturers Since 1869

David Round
HOISTING EQUIPMENT

▲ For more details circle NED-4895 on enclosed inquiry slip ▲

HERE'S THE TEAMMATE

Get fast, convenient grinding of lathe centers, cutters, reamers, rolls and dies. You can do it with THE CINCINNATI Ball Bearing Tool Post Grinder!

THE CINCINNATI mounts on the compound rest of any lathe with a 9" swing, or larger. It grinds within 2½" of the maximum swing . . . can be swivelled around the clamping bolt . . . spindle height is readily changed. Motor mount is adjustable for easy maintenance of belt tension. Write today! Ask for name of your distributor or Bulletin 52 TD.

THE BEST IN DRILLS, GRINDERS, BUFFERS, PORTABLE TOOLS

TRADE The Cincinnati MARK

ETCO 50th Anniversary

THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
CINCINNATI 8, OHIO

▲ For more details circle NED-4896 on enclosed inquiry slip ▲

▲ For more details circle NED-4897 on enclosed inquiry slip ▲

New Literature & Catalogs

Inspection Control Forms

McCaskey Register Co., Industrial Div.—Reproduced and described in 4-page bulletin A-512 are seven multiple-copy forms designed to control inspection of tools, gages and measuring instruments. It also presents simple procedures for reinspection date follow-up, central clearance records for each employee's gages and instruments, and gage and instrument history records.

▲ For more details circle NED-4898 on enclosed inquiry slip ▲

Photographic Copying Device

Polaroid Corp.—How the Polaroid Copymaker, a 60-second copying device, can be put to use for copying letters, book pages, office records and small machine parts is shown in 4-page folder "Get Copies in a Minute." Device makes 3¼ x 4¼-in. photo copies of objects measuring up to 11 x 14 in. No photographic skill is required to operate the packaged equipment.

▲ For more details circle NED-4899 on enclosed inquiry slip ▲

Elevating Towers

American-Tubular Elevator Co.—Comprehensive 8-page illustrated catalog No. 249 contains complete data on single and double well tubular elevating towers with 3000 and 5000-lb live load capacities. Rigging diagrams are included. Towers can be equipped with concrete handling equipment which is interchangeable with conventional platform cage. Material handling booms of 1000 or 2000-lb capacity can be rigged to towers.

▲ For more details circle NED-4900 on enclosed inquiry slip ▲

Pipe Tools & Machines

Beaver Pipe Tools, Inc.—If you use pipe in any form, you'll find some worthwhile information in the 28-page 1952 catalog and data book "Beaver Pipe Tools." Three pipe and bolt machines, ratchet threaders, reamers, cutters, power drives and other pipe tools are described. Included is "Operating Guide" showing step-by-step procedures as well as maintenance hints for users of pipe tools.

▲ For more details circle NED-4901 on enclosed inquiry slip ▲

Steel Products

Allegheny Ludlum Steel Corp.—"Allegheny Ludlum Serves the West" is title of 8-page illustrated bulletin that lists equipment and production facilities of company's Los Angeles Forge Plant; range of stock in its tool steel warehouses in Los Angeles and San Francisco; and its sales and engineering representatives on the West Coast.

▲ For more details circle NED-4902 on enclosed inquiry slip ▲

Presses & More Presses

E. W. Bliss Co.—28-page illustrated catalog No. 35-C condenses complete data on line of presses which includes bench, open back inclinable, horning, end wheel punching, gap frame, arc, straight side single and double crank, toggle drawing, hydraulic drawing, coining, embossing, sizing and special types. Also detailed are automatic feeds, die cushions, ammunition making machinery, can and container making units, rolling mill equipment and similar press machines.

▲ For more details circle NED-4903 on enclosed inquiry slip ▲

HERE'S DUO-SAFETY'S
TWO-SIDED . . . ALL ALUMINUM
MAINTENANCE LADDER

Double Size Platform

Especially Sturdy Spreader

A. Angle Clip Brace.
B. Serrated, Reinforced Step.
C. Angle Brace.

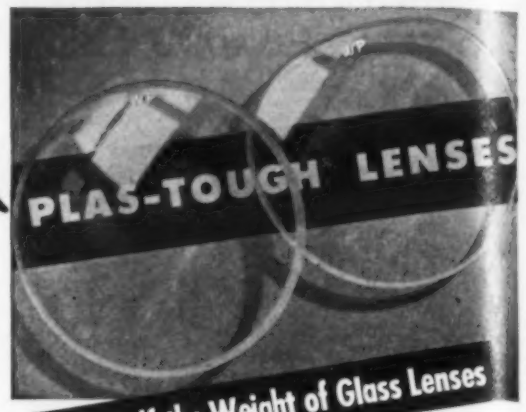
A new ladder in the famous Duo-Safety line of strong, sturdy, aluminum industrial ladders. Has a double climbing side, large top platform, rubber safety boots, light, strong aluminum construction. Ideal for all types of overhead maintenance work including use with extension planks. Available in sizes from 3 to 16 feet and is collapsible for storage in a limited space.

Free, Colorful File Catalog . . . Sent on Request

DUO-SAFETY LADDER CORP.
811 NINTH ST. OSHKOSH, WIS.

▲ For more details circle NED-4904 on enclosed inquiry slip ▲

New WILLSON®



Only Half the Weight of Glass Lenses

• 6-Curve—50 mm. Round
• 6-Curve—P3 Drop Oval—44 and 47 mm.

Add extra comfort to your safety goggles and spectacles with these lightweight, extra tough plastic lenses. Improved surface hardness gives unusual resistance against pitting, scratches, abrasion and many industrial acids that would mar ordinary plastics. Plas-Tough® lenses meet Federal Specifications for impact resistance and light transmission. Replace with Plas-Tough® !

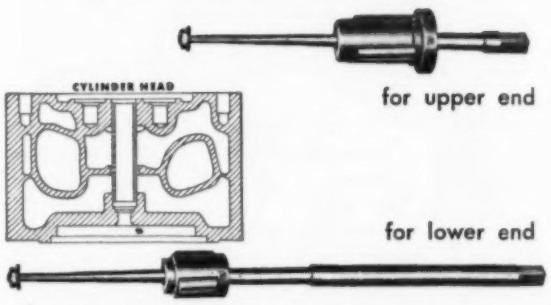
Write for Descriptive Folder

WILLSON PRODUCTS, INC.
219 Washington Street • Reading, Pa.

▲ For more details circle NED-4905 on enclosed inquiry slip ▲

IDEAL

For Rolling in Diesel Cylinder Head Sleeves



Use Ideal Expanders designed to roll both ends of sleeve parallel in cylinder head.

Expander (for upper end) has inset shoulder to position cylinder sleeve while rolling.

Expander (for lower end) passes through sleeve and automatically positions itself for rolling.

Write Today For Details

THE GUSTAV WIEDEKE COMPANY
DAYTON 1, OHIO

▲ For more details circle NED-4906 on enclosed inquiry slip ▲

DON'T BUY HALF A COMPRESSOR!

GET FULL-RATED GUARANTEED OUTPUT WITH WAYNE

When you buy a Wayne Compressor you are guaranteed actual usable air output . . . not theoretical ratings. Every Wayne two-stage compressor is checked for volumetric efficiency and performance—guaranteed to the user.

Wayne Compressors have larger flywheels—more cooling capacity; dual intake valves; dual moisture extractors; improved lubrication system; automotive type pistons to provide top performance . . . long-lasting service.

Don't buy half a compressor, buy a Wayne and get full rated, guaranteed air output to meet your job requirements. Every Wayne Compressor is backed by a nation-wide service organization.

Wayne

THE WAYNE PUMP COMPANY • SALISBURY, MARYLAND

▲ For more details circle NED-4907 on enclosed inquiry slip ▲

SINGLE-ACTING **Air-Clamp**

*Pneumatic Cylinders

Bore	STROKES Horizontal	Vertical
1"	⅝"	⅝"
2¼"	1"-2"-3"	1"-2"
3"		½"-2"
4"	2"-2½"	2"
5"	3"	3"
6"	3"	2"

NEW CATALOG READY! Complete line of simple adaptable, compact spring-return air cylinders. Cut costs and speed up production the modern, Air Power way. Write today.

MEAD SPECIALTIES COMPANY

4114 No. Knox Ave., Dept. N-52-A, Chicago 41, Ill.

For more details circle NED-4908 on enclosed inquiry slip

An Outstanding Record of Acceptance!

LESLIE Floatless LEVEL CONTROL

Installation on five 90000 kw generator condensers, in service 12 months—led to 16 more installations for same company—typical of the fast growing acceptance of this rugged and accurate level control.

ADVANTAGES

- EASY TO INSTALL
- ACCURATE REGULATION (±1" WATER COLUMN)
- NO FLOATS, STUFFING BOXES, ETC.
- DIAPHRAGM PRESSURE ELEMENT
- ACTION REVERSIBLE

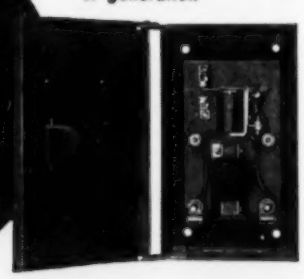
SEND for illustrated bulletin

LESLIE CO., 227 Grant Avenue, Lyndhurst, New Jersey 1870

For more details circle NED-4909 on enclosed inquiry slip

NEW A-C WIDE RANGE CURRENT RELAY IS REACTOR TYPE, CHATTER-FREE

- A LOAD-SENSING DEVICE for safety or protection purposes in control, power generation



Bulletin 403 describes Ward Leonard's new reactor type relay for a-c circuits where currents are subject to wide variations. Current ratios up to 50 to 1 are standard, 200 to 1 on special order.

A saturable reactor is connected in parallel with a sensitive relay coil. The relay remains closed throughout specified current range—opens only when load current falls below minimum or when disconnected from reactor.

Silver-to-silver SPDT contacts assure positive make and break.

Write for relay Bulletin 403. WARD LEONARD ELECTRIC CO., 51 South Street, Mount Vernon, N. Y. Offices in principal cities of U.S. and Canada.

WARD LEONARD ELECTRIC CO.

Result-Engineered Controls Since 1892

RESISTORS • RHEOSTATS • RELAYS • CONTROL DEVICES

For more details circle NED-4910 on enclosed inquiry slip

New Literature & Catalogs

Radiation Counter Tubes

Amperex Electronic Corp.—Stable and uniform characteristics, standardized design for large scale production and unlimited life are features of radiation counter tubes detailed in 22-page illustrated loose-leaf catalog. Gamma, beta-gamma, alpha-beta, beta and x-ray counters are described.

For more details circle NED-4911 on enclosed inquiry slip

Stop Paint Overspray

Research Products Corp.—Means of removing paint overspray solids from the air exhausted from paint spraying areas is provided by Paint Arrestors, described in 12-page illustrated booklet 1217 "Stop Paint Overspray." They are designed for use in existing and new booths having capacities from 300 to 112,000 cfm. When pads which filter out the solids become filled, they are discarded and new ones inserted. How to plan your installation and examples of applications are shown.

For more details circle NED-4912 on enclosed inquiry slip

Flow Meter Selection Aid

Fischer & Porter Co.—40-page illustrated handbook No. 10596 aids in the selection and sizing of variable area flow meters. It has descriptions of variable area meters, tubes and floats, plus a comparison with variable head meters and calibration prediction data.

For more details circle NED-4913 on enclosed inquiry slip

Bellows Templates

Time consuming job of reproducing the many convolutions of metal bellows in sketches and drawings has been eased by the offer of bellows template kits. The 20 most popular sizes are included. Template is placed under tracing paper and its outline is traced. Standard dimensions are shown, as are sizes and characteristics. Request on company letterhead from Clifford Mfg. Co., 124 Grove St., Waltham 54, Mass.

For more details circle NED-4914 on enclosed inquiry slip

Industrial Ovens & Furnaces

Jensen Specialties, Inc.—Sections of 16-page brochure on Pan-L-Heat industrial ovens are devoted to methods of material handling, typical temperature cycles, new methods of heat application, available fuels and auxiliary equipment. Table presents steps in selecting industrial heating equipment.

For more details circle NED-4915 on enclosed inquiry slip

Fork Lift Trucks

Towmotor Corp.—The inside story behind Towmotor quality, as related in this 12-page illustrated brochure D.M.F.-1, covers engineering, construction and performance features of its fork lift trucks. Outstanding features of trucks are described and some uses are shown.

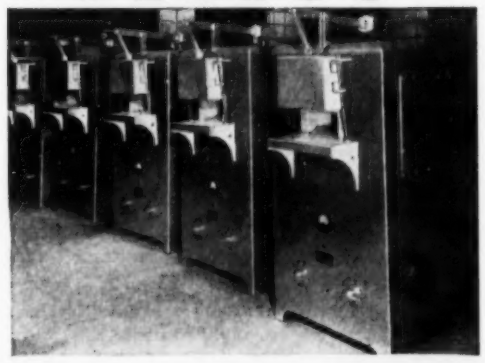
For more details circle NED-4916 on enclosed inquiry slip

Pump Application Guide

Tuthill Pump Co.—One table of this guide for small pump applications lists the various types of Tuthill pumps, services for which each is built, performance characteristics, types of packing, styles of mounting and distinguishing features.

For more details circle NED-4917 on enclosed inquiry slip

PERECO



Electric Furnaces

The user who ordered the above battery of FG-76 Furnaces knows he can rely on Pereco Equipment. The versatile FG-76 is designed for economical, expert handling of shop or laboratory heat treating, requiring close control of temperatures up to 2500° F. It is a compact, fully equipped unit that is streamlined and has all operating controls readily accessible. Work chamber is 8" w. x 6" h. x 16" l. Other models and sizes also available in the "FG" Series. Write for complete details.

• Standard or Special Units • 450° F. to 5000° F. •

PERENY EQUIPMENT COLUMBUS OHIO

Pereny Equipment Co.

Dept. G, 893 Chambers Rd., Columbus 12, O.

For more details circle NED-4918 on enclosed inquiry slip

with MULTI-CLEAN CONCRETE FLOOR FINISHES and THE MULTI-CLEAN METHOD

Concrete floor maintenance ceases to be a time killer and financial burden with the efficient, economical Multi-Clean Method. Multi-Clean Neo-Dry Concrete Sealer or Multi-Clean Concrete Preserver fortifies concrete against abrasion, oils, acids. Eliminates flaking and dusting. Conditions surface for heavy traffic by imparting a tough, sanitary finish . . . is an excellent base for Multi-Clean Anti-Slip Waterproof Wax.

Eliminate long hours of scrubbing and sweeping with the Multi-Clean Scrubber and Multi-Clean Wet-Dry Vacuum, a floor maintenance team unexcelled for reducing floor care time and costs on every type of floor. Write us about your floors and we will show you how to profit by using the Multi-Clean Method.

Write Multi-Clean Products, Inc., Dept. NE-5 for more information.

Multi-Clean All-Purpose Scrubber

Multi-Clean Wet-Dry Vacuum

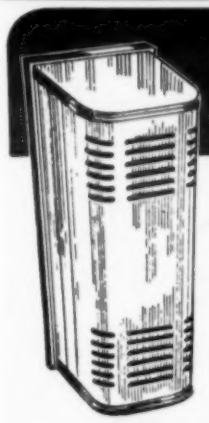
MULTI-CLEAN PRODUCTS, INC.

2277 Ford Parkway ST. PAUL 1, MINNESOTA

Free! FLOOR MANUALS—Handy file size, each manual deals with a specific type of floor, its characteristics and care . . . concrete, terrazzo, wood, asphalt and rubber tile, linoleum.

For more details circle NED-4919 on enclosed inquiry slip

DEODOROMA



"I make this washroom a pleasant place"

Your premises are often judged by the condition of your lavatories. Foul, stale odors can't be excused when about 2 cents a day can purchase CONSTANT, PLEASANT, EFFECTIVE DEODORIZATION!

The DOLGE DIFFUSEUR marks the thoughtfully maintained lavatory. This sturdy chromium or plastic "sentinel of smells" requires next to no attention. Merely place a DEODOROMA block refill into it about every 90 days. Then there'll always be a fresh, fragrant atmosphere *where it's needed most.* Your choice of three delightful DEODOROMA scents—Rose, New Mown Hay and Ced-O-San.

For SPOT DEODORIZATION

Use DEODOROMA CRYSTALS in any of the above scents; DEODOROMA URINAL BLOCKS, in Ced-O-San only.

CONSULT YOUR DOLGE SERVICE MAN OR WRITE FOR FOLDER EDJ-1044

Dependable DOLGE

WESTPORT, CONNECTICUT

For more details circle NED-4920 on enclosed inquiry slip

Save Time...Labor...Material with BEVERLY metal cutting SHEARS

throatless SHEARS

Make any cut—straight, irregular, curved. Exclusive design permits turning work any direction while cutting. 4 models—cap. to 3/16".

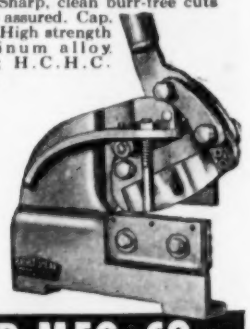
Inside SLOTTER

Makes cuts up to 8" inside edge of sheet. Sharp, clean burr-free cuts always assured. Cap. 16 ga. High strength aluminum alloy body; H.C.H.C. blades.

slitting SHEAR

New "SS" Series—easier cutting with compounded linkage. 3 models—cap. to ¼"; trimming capacity to ¼" mild.

See your Beverly Distributor. Write for FREE illustrated Bulletin.

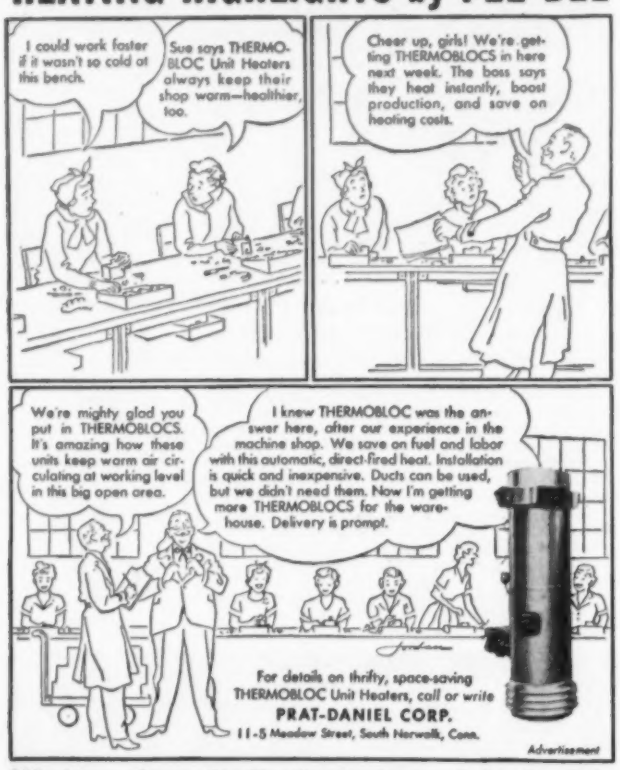


Beverly SHEAR MFG. CO.

3016 W. 111th STREET • CHICAGO 43, ILLINOIS

For more details circle NED-4921 on enclosed inquiry slip

HEATING HIGHLIGHTS by PEE-DEE



Write for P-D Catalog 30-C-34

▲ For more details circle **NED-4925** on enclosed inquiry slip ▲

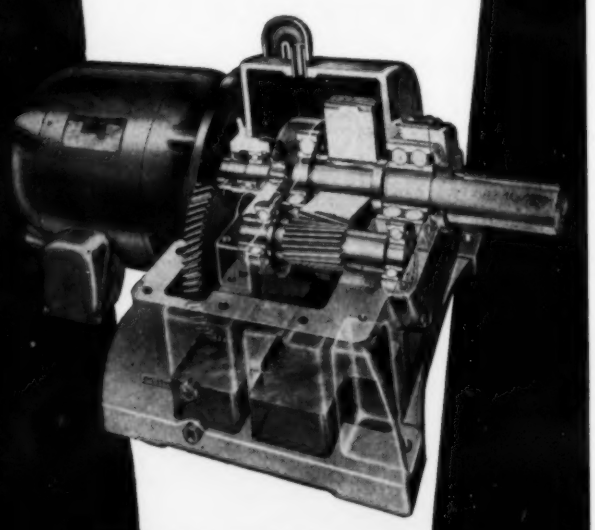
Here's how to cut servicing time on Gearmotors

The answer is—use Gearmotors that have split-case construction. For either electrical or mechanical inspection or maintenance, split-case construction saves many hours of costly time by providing easy accessibility to the gears or the motor.

Simply by removing the top half of the gear case, the gears or the motor can be inspected or repaired without touching the mounting bolts—without draining the oil—without disturbing the connected load. The complete job takes but a few minutes.

Get the complete details on Life-Line Gearmotors from your Westinghouse representative. Or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-07316



YOU CAN BE SURE... IF IT'S Westinghouse

Life-Line GEARMOTORS

▲ For more details circle **NED-4926** on enclosed inquiry slip ▲

New Literature & Catalogs

Die Sets & Supplies

Die Supply Co.—92-page illustrated catalog No. 6 is packed full of information and engineering data on tool, die and machine shop supplies, with particular emphasis on die sets. Tabbed and well indexed, this guide is divided into sections on standard and special die sets; Die-Co springs; screws, nuts and bolts; die accessories; drill jig bushings; and toggle clamps. You'll find a size and type for every diemaking need.

▲ For more details circle **NED-4927** on enclosed inquiry slip ▲

Hydraulic Power Units

Rivett Lathe & Grinder, Inc.—Single, double and combination pump type hydraulic power units are subject of 4-page illustrated catalog section 400. Application and selection data are given on six tank sizes with single pump units having capacities from 0.4 to 40 gpm at 1000 psi and four double pump units which supply 3.5 to 48 gpm.

▲ For more details circle **NED-4928** on enclosed inquiry slip ▲

Sheet Metal Production Facilities

Lyon Metal Products, Inc.—Facilities, management personnel and finances that are available at the Aurora, Ill. and York, Pa. plants of this company are covered in detail in 20-page illustrated booklet "Craftsmen in Sheet Metal Production." Plants are equipped to handle practically any sheet metal fabricating operations on a contract basis.

▲ For more details circle **NED-4929** on enclosed inquiry slip ▲

Solenoid Pilot Valves

Valvair Corp.—8-page illustrated folder P deals with air, vacuum, oil and water solenoid pilot valves. Sectional drawings show design and construction features of these units which are offered in two, three and four-way designs for pressures up to 175 psi and in sizes from ¼ to 1 in.

▲ For more details circle **NED-4930** on enclosed inquiry slip ▲

Selling Techniques

"Selling to Industry", by Bernard Lester, is a compact pocket-size 255-page manual of practical ideas and suggestions for the sales engineer who wants to analyze and improve his methods of finding, contacting, selling and servicing industrial customers. Price is $3.50. Published by Industrial Press, 148 Lafayette St., New York 13, N. Y.

▲ For more details circle **NED-4931** on enclosed inquiry slip ▲

Arc Welding Accessories

General Electric Co.—Three illustrated bulletins describe line of arc welding accessories. GEC-867 is a 2-page catalog of recommended protective clothing. Welding helmets and glass is subject of 4-page data sheet GEC-865. Brushes, carriers, chipping hammers, paint and weld spatter compounds, and weld gages are covered in 2-page illustrated bulletin GEC-866.

▲ For more details circle **NED-4932** on enclosed inquiry slip ▲

Static & Dynamic Balancing

Gisholt Machine Co.—Guidance on methods and procedures for balancing rotating parts is provided in 16-page illustrated reprint of section 89 from the Tool Engineers Handbook. Such factors as causes of unbalance, need for balancing, correction of unbalance, selection of balancing machines and inspection for accuracy of balance are discussed.

▲ For more details circle **NED-4933** on enclosed inquiry slip ▲

Tapping Equipment

Procunier Safety Chuck Co.—Manufacturers interested in increasing the productive capacity of their tapping equipment will find valuable guidance in 6-page illustrated bulletin 101. Descriptions and specifications are included in Tru-Grip tap holder that minimizes tap breakage, Tap King heavy duty tapping attachment for large size taps, cover clamping models of tapping heads for all types of drill presses, and accessories and adapters for tapping heads.

▲ For more details circle **NED-4934** on enclosed inquiry slip ▲

Miniature Lamps

General Electric Co., Lamp Div.—Vital statistics on line of miniature lamps, including size, life, voltage and cost, is given in 36-page illustrated "Miniature Lamp Catalog." Lamps for aviation, marine, medical, toy train, automobile, flashlight, appliance, and other fields are shown. Miniature lamps, as distinguished from other types of lamps, are operated on low voltage power sources, such as dry cells, battery generator systems or transformers.

▲ For more details circle **NED-4935** on enclosed inquiry slip ▲

Industrial Washroom Design

American-Olean Tile Co.—20-page illustrated booklet 300 points out that "morale s-o-a-r-s and maintenance d-r-o-p-s" with modern industrial washrooms, cafeterias, dispensaries and kitchens. How to give these rooms color, attractiveness and cleanliness through the use of ceramic wall and floor tile is shown. Tiles are shown in colors offered and variety of patterns are suggested.

▲ For more details circle **NED-4936** on enclosed inquiry slip ▲

Give Gummed-up Paint the Brush-off!

with

CABOT'S BRUSH CLEANER

Good brushes are valuable and hard to get. Keep them in top condition. Non-inflammable, fast-working Cabot's Brush Cleaner knocks out hardened paint right down to the heel. Safe for bristles and settings . . . won't evaporate . . . comes ready to use . . . economical because it can be used over and over again!

FREE SAMPLE and complete information . . . write today to

Samuel Cabot, Inc.

532 Oliver Building Boston 9, Massachusetts

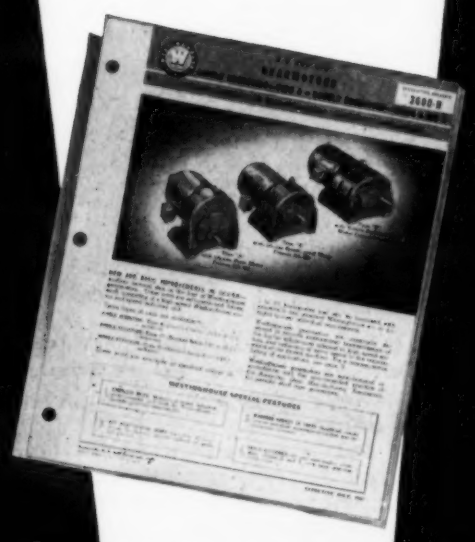
▲ For more details circle **NED-4937** on enclosed inquiry slip ▲

Get your free copy of this Gearmotor booklet

Here are eight pages packed full of factual information on Life-Line Gearmotors. Application data, gearing specifications, motor specifications, methods of mounting, control selection and special features are included in this ready reference manual.

A free copy is waiting for you. Just send a note asking for a copy of DB-3600 to Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pennsylvania. Or, call your Westinghouse representative and ask him for your copy.

J-07317



YOU CAN BE SURE... IF IT'S Westinghouse

Life-Line GEARMOTORS

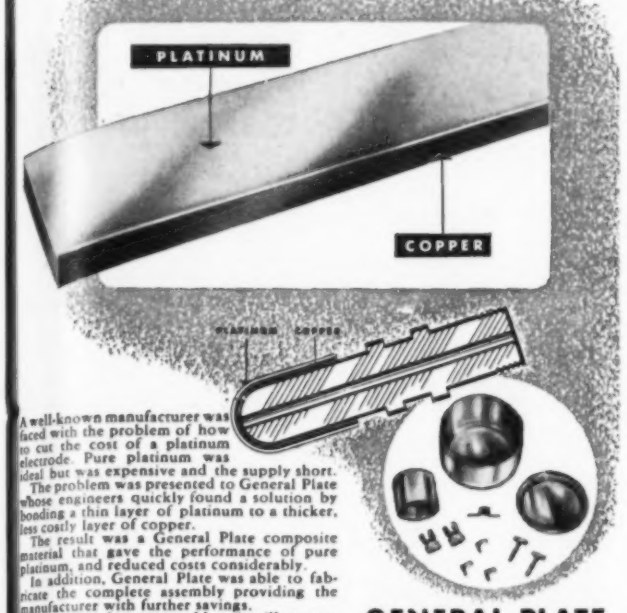
▲ For more details circle **NED-4938** on enclosed inquiry slip ▲

PROBLEM:

How to Reduce the High Cost of Platinum in an Electrode?

GENERAL PLATE

Provided the Solution with Platinum Clad to Copper . . . A Composite Metal.



A well-known manufacturer was faced with the problem of how to cut the cost of a platinum electrode. Pure platinum was ideal but was expensive and the supply short.

The problem was presented to General Plate whose engineers quickly found a solution by bonding a thin layer of platinum to a thicker, less costly layer of copper.

The result was a General Plate composite material that gave the performance of pure platinum, and reduced costs considerably.

In addition, General Plate was able to fabricate the complete assembly providing the manufacturer with further savings.

No matter what your problem, it will pay you to consult with General Plate. Their vast experience in cladding precious to base metals, or base to base metals can overcome your problems . . . often reduce costs.

GENERAL PLATE
Division of Metals & Controls Corp.
85 Forest St., Attleboro, Mass.

▲ For more details circle **NED-4939** on enclosed inquiry slip ▲

LARGE OR SMALL
SHORT OR TALL

Electroline Fittings

ARE THE CHOICE OF ALL

There's an Electroline Wire Rope Fitting to suit your every need. Actual tests have proved their great holding power in all applications, regardless of size or type.

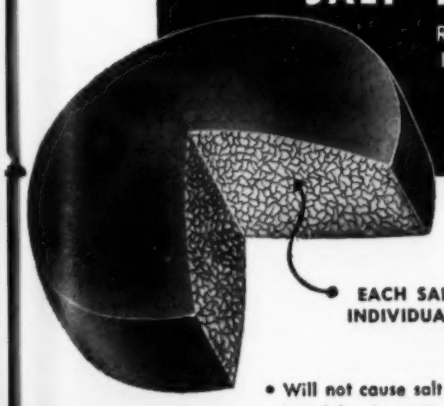
Electroline Fittings are installed easily and safely with ordinary tools—by unskilled labor in a matter of minutes—without the danger of molten metal or acids—without blow torches or special tools.

To give you the whole story of Electroline Wire Rope Fittings, we have prepared a pocket-size illustrated catalog, filled with information of sizes and types. Why not send for your copy today?

Electroline COMPANY
4121 SOUTH LA SALLE STREET
CHICAGO 9, ILLINOIS
IN CANADA: POWERLITE DEVICES, LTD., TORONTO

▲ For more details circle **NED-4940** on enclosed inquiry slip ▲

New **PEP-UP** IMPREGNATED
SALT TABLETS
RELEASE SALT IMMEDIATELY
(Not Enteric Coated)



EACH SALT CRYSTAL INDIVIDUALLY COATED

- Will not cause salt sickness or nausea
- No delay in getting salt into system
- Starts dissolving immediately
- Dissolves completely in about 100 minutes
- Withstands rough handling and storage without deterioration
- Meets Government Specification No. SS-S-31D
- Order Now—Be Prepared
- Write for literature and prices

DISPENSER
PEP-UP Impregnated Salt Tablets come to you in sanitary, factory-sealed dispensers at no extra cost.

UNITED STATES SAFETY SERVICE CO.
KANSAS CITY 6, MISSOURI — BRANCHES IN PRINCIPAL INDUSTRIAL CITIES
In Canada PARMELEE, LTD. Toronto

▲ For more details circle **NED-4941** on enclosed inquiry slip ▲

New Literature & Catalogs

Electric Motors

Westinghouse Electric Corp.—Design and application data on Life-Line motors, now available in ratings from 20 to 700 hp, are detailed in 20-page illustrated booklet B-4731. Use of motors in paper, chemical, central station, mining, lumber and metalworking industries are cited. Wide range of sizes and types can be supplied.

▲ For more details circle **NED-4942** on enclosed inquiry slip ▲

Contour Milling

Onsrud Machine Works, Inc.—Details of automatic contour milling machine for milling of aircraft components are presented in 6-page illustrated bulletin 1136. This high speed machine tool can be made with beds up to 90 ft long, and carriage speeds of 2 to 225 in. per minute are feasible.

▲ For more details circle **NED-4943** on enclosed inquiry slip ▲

Permanent Magnetic Tools

Multifinish Mfg. Co., Magnetool Div. — Illustrations, specifications and price data on 16 hand-operated, permanent magnet tools for handling, salvaging, sorting, separating, detecting, cleaning, extracting, loading, holding, inspecting, retrieving and protecting can be found in 4-page technical bulletin No. M-30.

▲ For more details circle **NED-4944** on enclosed inquiry slip ▲

Carbide-Tipped Tools

Super Tool Co.—Specifications and prices for wide variety of carbide-tipped tools for turning, facing, threading and boring are included in 8-page illustrated supplement No. 5 to catalog N. 50. Tools are tipped with Carboloy and Kennametal (standard) but can be tipped with any of other carbides.

▲ For more details circle **NED-4945** on enclosed inquiry slip ▲

Magnetic Devices

Heppner Mfg. Co.—Snap-on, screw-on and slip-on ion traps; centering devices for electrostatic TV tubes; Alnico P.M. speakers; adjustable focus magnet and flyback transformers as well as manufacturing facilities are covered in 8-page illustrated catalog on electro-magnetic and magnetic devices.

▲ For more details circle **NED-4946** on enclosed inquiry slip ▲

Engineering & Metalworking Facilities

A. W. Hecker Co.—Creative engineering, tooling and parts production facilities of this company are subject of 8-page illustrated report. Highlights are given on manufacture of tools, jigs, fixtures and special tooling. Over 22 industries are served by company in producing parts and assemblies to users' specifications.

▲ For more details circle **NED-4947** on enclosed inquiry slip ▲

Drafting Stencils

John R. Cassell Co.—"Axiometric Drawing" is title of 20-page illustrated booklet which shows drawings produced with Instrumaster isometric and dimetric stencils and protractors which give three-dimensional effect. Details are given on stencils for cross-hatching, house plans, bolts and nuts, building layout, chemical and petroleum symbols, circles, hexagons, radii, ellipses, architectural drawing, electric diagrams and symbols and lettering.

▲ For more details circle **NED-4948** on enclosed inquiry slip ▲

First and Only! **Pocket Comparator**

Cross-section of Pocket Comparator (actual size) (pat. applied for)

Saves time and money inspecting small dimensions . . .

Nothing else like it! A precision optical measuring instrument for fast, accurate inspection of small dimensions. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as radii, angles, chamfers, threads and small holes on production parts.

PRICE **$36.00**
ORDER TODAY

A product of **BELL & HOWELL CO.** Distributed by

See Your National Tool Co. Representative or Local Jobber
NATIONAL TOOL CO.
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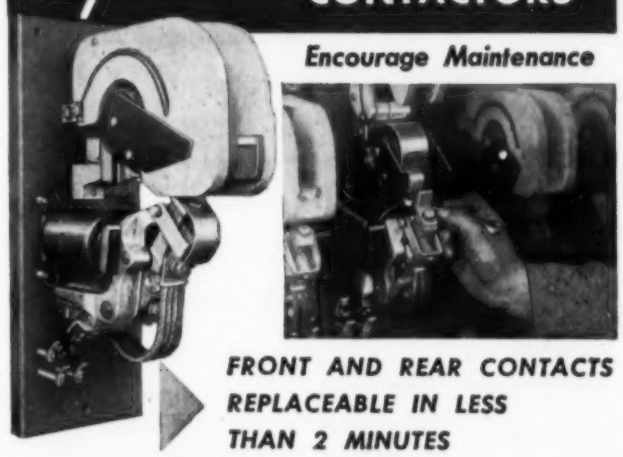

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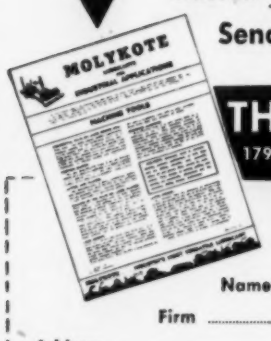

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MAY, 1952

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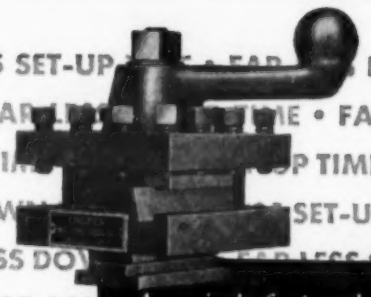

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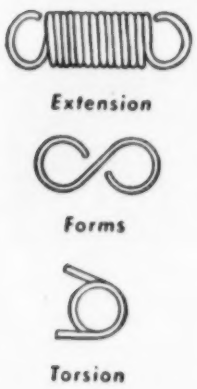

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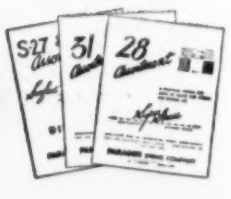

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For more details circle NED-4961 on enclosed inquiry slip

New Literature & Catalogs

Crushing, Milling & Grinding

Sprout, Waldron & Co.—16-page illustrated bulletin 45-B shows typical models and gives details on hammermills, attrition mills, pellet mills, mixers, roller mills, pneumatic systems, cutters, crushers and supplementary equipment.

For more details circle NED-4962 on enclosed inquiry slip

Optical Comparator

Portman Instrument Co.—Among features of vertical model C-100 optical comparator described in illustrated form K1 are illumination, optical system, large screen area, horizontal swing-away stage and chassis construction. Specifications and data on auxiliary equipment are included.

For more details circle NED-4963 on enclosed inquiry slip

Parts & Supplies

Harry Alter Co.—Over 9000 parts and supplies in the fields of refrigeration, television, radio, heating, air conditioning and electric motors are illustrated and described in Dependabook No. 156. Prices are given for all components and complete units.

For more details circle NED-4964 on enclosed inquiry slip

Room Air Conditioner

American Radiator & Standard Sanitary Corp.—24-page engineering manual No. 257 supplies complete engineering, specifications and selection data pertinent to the Remotaire, a remote type dual purpose air conditioner. Unit provides heated as well as cooled air for year 'round conditioning and is available in two models, both for multiroom installation. Features, ratings and dimensions plus charts depicting cooling selection and water flow are offered.

For more details circle NED-4965 on enclosed inquiry slip

Damage Control System

Brinnell Co.—The Protectron, an electronic device for minimizing maintenance and increasing production efficiency, is subject of 8-page illustrated bulletin 252 which points out that this equipment has reduced tool and die breakage up to 86 per cent. Device senses mechanical load on motor driven machines and shuts off machine at slightest increase over normal operating load.

For more details circle NED-4966 on enclosed inquiry slip

Tapeless Veneer Splicer

50-page illustrated service manual No. 100 is first of series covering line of moulders, rip saws, cut-off saws, glue jointers and edge moulders and veneer jointers and edge gluers. Sections give step-by-step direction for installation, lubrication, cleaning, operating procedures, maintenance, adjustments on pressure bars and parts installation. Price is $2.50. Published by G. M. Diehl Machine Works, Inc., 1128 Collins Ave., Wabash, Ind.

For more details circle NED-4967 on enclosed inquiry slip

Automatic Indexing Table

Turner Bros., Inc.—Available in 2 to 36 stations, in any equal division of 360 degrees, the Hautau-Turndex automatic indexing table is adaptable for milling, drilling, reaming, boring, crimping, stamping and assembling. Table is described in 8-page form TG-100 which also gives dimensional drawings, illustrations and specifications on two available models.

For more details circle NED-4968 on enclosed inquiry slip

Lump Material Crushers

Stephens-Adamson Mfg. Co.—Complete line of crushers designed for reducing coal, coke, glass, cullet, gypsum, lime, metal turnings, sugar, sulphur and other lump materials is covered in 16-page illustrated bulletin 12-C. Capacity and power requirements for all types are given and installation dimensions are tabulated. Photos and line drawings explain operating principles.

For more details circle NED-4969 on enclosed inquiry slip

Tire Supplies & Accessories

Myer's Tire Supply Co.—"Everything for the Tire Dealer" including tire repair materials, replacement valves, changing tools as well as tire servicing, vulcanizing and recapping supplies, service tools and automobile accessories are listed in 60-page 1952 catalog. Accompanying the catalog is 16-page No. 1 supplement which contains new products not shown in the main listing.

For more details circle NED-4970 on enclosed inquiry slip

Molybdenum Lubrication

Lockrey Co.—"Abstracts, Bibliography and Case Histories of Liqui-Moly (Molybdenum Disulfide) Lubrication" is title of technical bulletin 21-G which lists reference literature, article abstracts and pertinent patents, plus a summary of two years of case histories of applications of Liqui-Moly lubricants. Metallic-base solid-film lubricant is effective at 200,000 psi at 800 to 1200° F for prolonged periods. Eleven forms in which lubricants are offered are described as well.

For more details circle NED-4971 on enclosed inquiry slip

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For more details circle NED-4974 on enclosed inquiry slip

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1. It offers a continuous visual load check that may be conducted from your service truck. Thus you can keep up-to-date records on performance at low cost.
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ALLIS-CHALMERS A-3718

▲ For more details circle **NED-4975** on enclosed inquiry slip ▲

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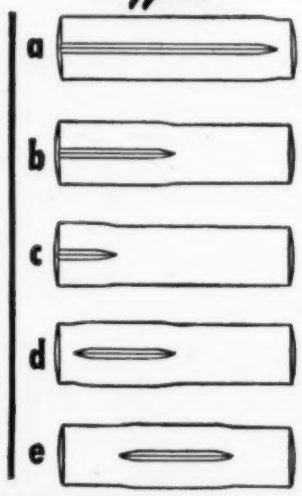

DRIV-LOK PIN COMPANY
717 Chauncey St. • Sycamore, Ill.

▲ For more details circle **NED-4976** on enclosed inquiry slip ▲

New Literature & Catalogs

Record Retention & Destruction

Remington Rand Inc.—"A Basic Plan for Record Retention and Destruction" is subject and title of 24-page brochure which will aid in planning for disposition of records at time they are created by destruction of useless records and safe storage of those retained. Handbook lists various types of records with time element for their retention.

▲ For more details circle **NED-4977** on enclosed inquiry slip ▲

Daylighting In Plants

American Structural Products Co.—How to achieve better daylighting conditions in industrial plants through use of light-directing prismatic glass block is described in 22-page booklet "Daylight for Industry." Booklet presents nontechnical explanation of controlled daylight based on experiments and practical installations.

▲ For more details circle **NED-4978** on enclosed inquiry slip ▲

Voltage & Current Regulators

Electric Regulator Corp.—Functions and applications of Regohm direct-acting, finger-type voltage and current regulators are analyzed in engineering bulletin 505.00. This 12-page book tells how regulators provide close control of voltage, frequency and current and how they can be used in servo systems. Typical circuits are included.

▲ For more details circle **NED-4979** on enclosed inquiry slip ▲

Industrial Dryers

C. G. Sargent's Sons Corp.—Ten industrial dryers designed for building materials, chemicals, food, metal parts, paint, paper products, plastics, rubber, soaps, textiles and wood products are pictured in 4-page bulletin 191.

▲ For more details circle **NED-4980** on enclosed inquiry slip ▲

Metal Cleaning Materials

Hanson-Van Winkle-Munning Co.—All those concerned with cleaning metal prior to electroplating, anodizing or painting will find bulletin C-107 of interest. Brochure defines six metal-cleaning methods, lists cleaners to use for aluminum, brass, bronze, copper, lead-alloys, magnesium, steel, iron and zinc-base die castings. Sections also cover soak cleaners and electrocleaners.

▲ For more details circle **NED-4981** on enclosed inquiry slip ▲

High Speed Steel Tools

M. A. Ford Mfg. Co.—Vol. 3, No. 1 issue of "Ford Filings" reports on recent tests of high speed steel tools on aluminum and magnesium applications. Lower production and tool costs, plus reduced production time figures are shown. Issue also contains chart of recommended operating speeds for rotary files and cutters.

▲ For more details circle **NED-4982** on enclosed inquiry slip ▲

Investment Castings

Austenal Laboratories, Inc., Microcast Div.—The field for precision castings in industry is related in 16-page illustrated booklet entitled "New Opportunities for the Creative Product and Design Engineer." Details of the Microcast process of precision investment casting are presented. Typical products produced, available alloys, possible tolerances, properties of alloys and related helpful information are included.

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Sheehan's TWO PLANE RUBBER BELT MODEL BR.

Another one of the famous Sheehan line of Press and Forge Conveyors —designed for exceptional maneuverability and hard service. This oil-resistant rubber belt is for carrying material that can not be conveyed on metal belts, such as stamping slugs, etc. Top of loading end of belt is within 8 inches of floor. Saves valuable working space because it will go back *under* presses with ease. Investigate the many construction and safety features not found in other conveyors.

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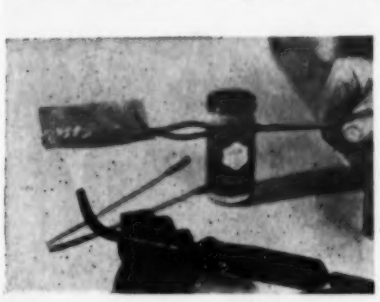

New liquid aluminum soldering flux makes possible sweating on aluminum, stainless steel, monel, copper, brass, steel or any combinations of same. The newly developed liquid chemical actually breaks the surface oxide on all types of aluminum so that a sweat job is possible in the same manner as ordinary flux on the common metals. Called Liquid ASMC Flux it makes possible the soldering together of such dissimilar metals as stainless steel to aluminum or any combinations of the above metals to aluminum or each other. When used in combination with Farrelloy All Metal Solder the Flux eliminates the electrolytic action between dissimilar metals so that a permanent bond, highly resistant to corrosion is obtained. ASMC Flux makes possible the use of induction heat as well as torch or iron. Production jobs using induction heat are now being accomplished putting two brass studs on Aluminum Name Plates at the rate of 250 per hour. Same flux when used with Farrelloy Solder is equally effective on filling in blow holes in aluminum castings, sweating name plates on cast iron, and many other jobs. ASMC Flux is priced at $3.50 per pound, fob Philadelphia. Farrelloy Solder $2.00 per pound, fob Philadelphia (14 bars to the pound). Write **Farrelloy Company, Dept. NED.** 1246 North 26th St., Philadelphia 21, Pa. *Advt.*

For more details circle NED-4989 on enclosed inquiry slip

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TECHNICAL COATINGS SINCE 1895

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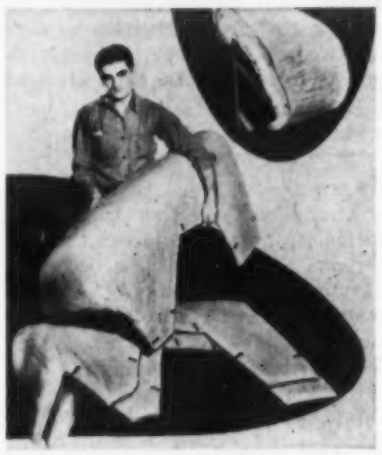

Consisting of sheets of heavy, tough, crepe paper between which are fastened cushioned layers of excelsior, Cadwrap wrapping protects large or odd-shaped parts or products from storage or transit damage. Integral wrapping is tailored to fit each part and is usually held in place with Cadclips. Stampings and sheet metal parts are protected from dents and scratches, yet they nest for compactness and ease of handling. Originally developed for the automotive industry, this material is now available for other purposes. It will be engineered for specific parts or products by **Cadillac Products, Inc.,** 2316 Gainsboro Ave., Ferndale 20, Mich.

For more details circle NED-4991 on enclosed inquiry slip

PAPER TREATING RESIN imparts greater wet strength

Up to 33 per cent more wet tensile strength is imparted to paper by application of Flaskon Aminoplast 348-11L resin than is provided by equal amounts of urea resins. Product is readily soluble, even in ice water, and can be added by any of standard methods for introducing wet strength resins into the papermaking process. It can be diluted for use or can be added as received with no mixing. Resin is 40-42 per cent solids, is a clear, light brown liquid with a pH of 6.8-7.4 and remains stable for at least 90 days. Made by **Libbey-Owens-Ford Glass Co.,** Plaskon Div., 2100 Sylvan Ave., Toledo 6, O.

For more details circle NED-4992 on enclosed inquiry slip

RESPIRATOR HOOD protects against dust, paint spray

Replaceable plastic window is new feature of "flyweight" respirator hood for protection against dust and paint spray. Hood is available with R2000 interchangeable cartridge and disk filter respirator. Seven snap fasteners facilitate window replacement. Hood has two drawstrings which tie under the arms for snug fit. It is leather reinforced and fits any head. Made by **American Optical Co.,** 1492 Mechanic St., Southbridge, Mass.

For more details circle NED-4993 on enclosed inquiry slip

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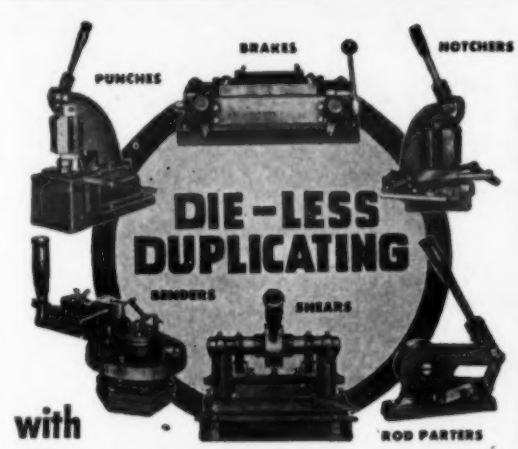

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